Stock and distribution registers

Following are the formats required for indent, supply, stock and distribution of vaccines and logistics:

- Stock register formats
- Indent and supply formats
- Vaccine distribution register
- Vaccinator's logistics diary

Stock register formats

VACCINE STOCK REGISTER - ISSUE AND RECEIPT

Name of the CHC/PHP/SC/UHC/PPC/Others: _____

Name of the Block: _____

Name of the District: _____

Name of the State: _____

Year: _____

Vaccine Stock Register - Issue and Receipt

Name of the Vaccine Store:												
Name of the Vaccine/Diluent/AD Syringe:												
Serial No.	Date	Opening Balance (Dose/Piece)	Received (Dose/ Piece)	Received From	Issued (Dose/ Piece)	Issued to (Name of Cold Chain Point/RI Sessions/ Discarded-Reason)	Challan No.	VVM Status (Usable/ Non-Usable)	Name of the Manufacturer	Batch No.	Expiry Date	Closing Balance (Dose/Piece)

Name of the CHC/PHC/PPC:		Name of the person distributing the vaccines:		Name of the person receiving return vaccines:																					
		Issue and Return of Un-opened Vaccine Vials (VVM Status-Usable)																							
		BCG Doses		BCG Diluent Doses		OPV Doses		OPV Dropper		Doses		Diluent Doses		JE Doses		JE Diluent Doses		DPT Doses		Hep-B Doses		TT Doses		Pentavalent Doses	
	Name of the Sub-centre/ UHP/HF-Session site	Issue	Return	Issue	Return	Issue	Return	Issue	Return	Issue	Return	issue	Return	Issue	Return	Issue	Return	Issue	Return	Issue	Return	Issue	Return	Issue	Return
1																									
2																									
3																									

Vaccine and logistics indent and supply formats

(Copy for Record for Requester)				(Copy for Record for Receiver)			
Indent No.:		Date:		Indent No.:		Date:	
From:				From:			
To:				To:			
Item	**Total amount received in current year**	**Balance available on date of indent**	**Amount requested**	**Item**	**Total amount received in current year**	**Balance available on date of indent**	**Amount requested**
BCG (doses)				BCG (doses)			
bOPV (doses)				bOPV (doses)			
DPT (doses)				DPT (doses)			
Hep B				Hep B			
Pentavalent				Pentavalent			
IPV (doses)				IPV (doses)			
JE				JE			
TT (doses)				TT (doses)			
BCG Diluent				BCG Diluent			
0.1ml AD Syringes				0.1ml AD Syringes			
0.5 ml AD Syringes				0.5 ml AD Syringes			
5 ml Disp. Syringes				5 ml Disp.Syringes			
VitA Syrup				VitA Syrup			
Signature of Receiver:		**Signature of Requester:**		**Signature of Requester:**		**Signature of Requester:**	
Name:		**Name:**		**Name:**		**Name:**	
Designation:		**Designation:**		**Designation:**		**Designation:**	

(Copy for Record for Supplier)						(Copy for Record for Receiver)					
Supply Voucher No.:			Date:			Indent No.:			Date:		
Reference Indent No			Dated:	Received on:		Reference Indent No			Date:	Received on:	
To:						To:					
	Item	**Amount Released**	**Batch No.**	**Expiry VVM Date Status**	**Remarks**		**Item**	**Amount Released**	**Batch No.**	**Expiry VVM Date Status**	**Remarks**
1	BCG (doses)					1	BCG (doses)				
2	bOPV (doses)					2	bOPV (doses)				
3	DPT (doses)					3	DPT (doses)				
4	Hep B					4	Hep B				
5	Pentavalent					5	Pentavalent				
6	IPV (doses)					6	IPV (doses)				
7	JE					7	JE				
8	TT (doses)					8	TT (doses)				
9	BCG Diluent (amp)					9	BCG Diluent (amp)				
10	Diluent (amp)					10	Diluent (amp)				
11	0.1ml AD Syringes					11	0.1ml AD Syringes				
12	0.5 ml AD Syringes					12	0.5 ml AD Syringes				
13	5 ml Disp. Syringes					13	5 ml Disp. Syringes				
14	VitA Syrup					14	VitA Syrup				
Received above vaccines and logistics in quantity mentioned and in good condition.						**Received above vaccines and logistics in quantity mentioned and in good condition.**					
Signature of Receiver:			**Signature of Store in Charge:**			**Signature of Receiver:**			**Signature of Receiver:**		
Name:			**Name:**			**Name:**			**Name:**		
Designation:			**Designation:**			**Designation:**			**Designation:**		

Vaccine distribution register for immunization session (2 pages)

VACCINE DISTRIBUTION REGISTER FOR IMMUNISATION SESSION

Name of the CHC/PHC/SC/UHC/PPC/Others:_____
Name of the Block:_____
Name of the District:_____
Name of the State: _____
Year:_____

HOW TO USE THE VACCINE DISTRIBUTION REGISTER FOR AN IMMUNISATION SESSION

1. Each page of this register should be used for only ONE Immunisation session day. If there are more than 28 sessions scheduled on 1 day, continue on the next page.
2. Add the name of the Sub-Centres to whom the vaccines are issued and the session site.
3. Always start transactions for next immunisation session in a new page of the register.

Issue of Un-Opened Vaccine Vials:
-The quantity for all the un-opened vaccine vials that are issued to the session site should be recorded in "doses".
-This should be done for each of the vaccines which are issued to the session site.

Return of Un-Opened Vaccine Vials:
-At the end of the session day, all the returned un-opened vaccine vials should be recorded in "doses".
-It should be recorded next to the quantity of vaccine that were issued in the morning.

Vaccine Distribution Register for Immunization Session

Type of the session (RI/ SIW/Campaign/Others):							Date:									
Syringes						Red and Black Plastic Bags (Yes/ No)	Issue and Return of Open Vaccine Vials (VVM Status-Usable)									
0.1ml		0.5 ml		5 ml			DPT vials		OPV vials		TT vials		Hep-B vials		Pentavalent vials	
Issue	Return (un-used)	Issue	Return (un-used)	Issue	Return (un-used)		Issue	Return	Issue	Return	Issue	Return	Issue	Return	Issue	Return

Net Utilised = (Issued Doses - Returned Doses)	BCG doses	BCG Diluent doses	OPV doses	OPV dropper	Doses	Diluent doses	JE doses	JE Diluent doses	DPT doses	Hep B doses	TT doses	Pentavalent doses	0.1ml	0.5 ml	5 ml

VACCINATOR'S LOGISTICS DIARY

1. This diary is to be maintained by the vaccinator and should be available at the session site.
2. This diary should be used for maintaining the records of Received and Returned Vaccines, Syringes and Diluents at the session site.
3. The name of the Vaccinator, Health Facility, Session Site and Session Date should be written in the upper part of the diary in the space provided.
4. The details for 'Un-Opened Vials & Syringes', and 'Open Vaccine Vials' should be recorded separately under the separate headings as provided in the dairy.

At the time of Receiving Vaccines/Diluents/Syringes and Other Logistics

Vaccinator's Logistics Diary

Name of Vaccinator.....Name of Health Facility:.....

Session Site: .....Date of session:.....

Un-Opened Vials & Syringes											
Item		Received (In Doses)					Returned (In Doses)				
Sl. No.	Name of the Items	Quantity	Manufacturer	Batch No.	Exp.Date	VVM	Quantity	Manufacturer	Batch No.	Exp.Date	VVM
1	OPV										
2	DPT										
3	Hep-B										
4	TT										
5	Pentavalent										
6	BCG										
7	Measles										
8	JE										
9	BCG Diluent										
10	Measles Diluent										
11	JE Diluent										

Other Logistics (in pieces)								
Items	Received	Returned	Items	Received	Returned	Items	Received	Returned
0.1ml			0.5 ml			5 ml		
OPV Dropper			Black Bag			Red Bag		

Open Vaccine Vials											
		Received					Returned				
		Quantity in Vials	Batch No.	Exp.Date	VVM	Date of Opening of vial	Quantity in Vials	Batch No.	Exp.Date	VVM	Date of Opening of vial
1	DPT vials										
2	OPV vials										
3	TT vials										
4	Hep-B vials										
5	Pentavalent vials										

Receiving Details		Returning Details	
Name and designation		Name and designation of Person	
Transport modality		Transport modality (AVD/self	
Date & Time		Date & Time	

1. At the end of the session, the vaccinator should fill the details of all logistics being returned and the mode of return of vaccine carrier.
2. The vaccinator should sign after the complete details are filled. Any supervisor visiting the session site should check the details and verify by counter signing.

At the time of Returning the Vaccines/Diluents/Syringes/and other Logistics

Un-Opened Vials & Syringes											
Item		Received					Returned				
Sl. No.	Name of the Items	Quantity	Manufacturer	Batch No.	Exp.Date	VVM	Quantity	Manufacturer	Batch No.	Exp.Date	VVM
1	OPV										
2	DPT										
3	Hep-B										
4	TT										
5	Pentavalent										
6	BCG										
7	Measles										
8	JE										
9	BCG Diluent										
10	Measles Diluent										
11	JE Diluent										

Other Logistics (in pieces)								
Items	Received	Returned	Items	Received	Returned	Items	Received	Returned
0.1ml			0.5 ml			5 ml		
OPV Dropper			Black Bag			Red Bag		

Open Vaccine Vials											
		Received					Returned				
		Quantity in Vials	Batch No.	Exp.Date	VVM	Date of Opening of vial	Quantity in Vials	Batch No.	Exp.Date	VVM	Date of Opening of vial
1	DPT vials										
2	OPV vials										
3	TT vials										
4	Hep-B vials										
5	Pentavalent vials										

Receiving Details		Returning Details	
Name and designation of Person delivering the stock to session site:		Name and designation of Person collecting the stock from the session and return to cold Chain Point:	
Transport modality (AVD/self collection/other-specify)		Transport modality (AVD/self collection/other-specify)	
Date & Time		Date & Time	

Signature of Vaccinator:

Notes:

UNIT-5

Safe injections and Waste Disposal

Learning objectives

- *Describe the importance of safe injections and ways to improve injection safety*
- *List steps to achieve safe injections and safe disposal of immunization waste according to existing GoI guidelines.*

Key Contents

Safe injections and waste disposal

5

Safe injections

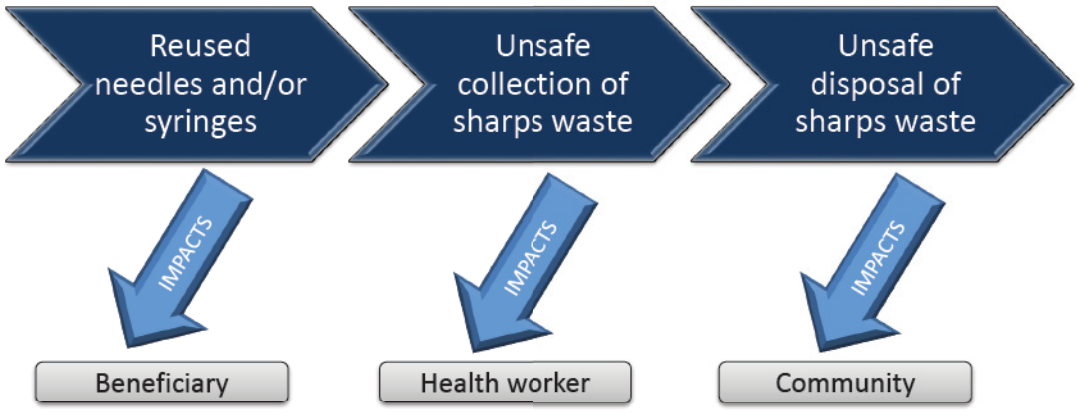
A safe injection is one that:

- does not harm the recipient
- does not expose the HWs to any avoidable risks
- does not result in waste, which is dangerous for the community.

The most common, serious infections transmitted by unsafe injections are Hep B, Hep C, and HIV. Poorly administered injections can also cause injuries or drug toxicity when the wrong injection site, vaccine, diluent, or dose is used. It is important to prevent the risks of accidental needle-stick injury, and it is also necessary to dispose of used syringes and needles safely to prevent risks to the community at large.

Impacts of unsafe injections are illustrated in Fig. 5.1.

Fig. 5.1. Impacts of unsafe injections



The provision of AD syringes by the GoI and the implementation of the Central Pollution Control Board (CPCB) waste management guidelines improves injection safety in the immunization programme.

Simple ways to improve injection safety

Keep hands clean before giving injections

- Wash or disinfect hands prior to preparing injection material.
- Cover any small cuts on the service provider's skin.
- Avoid giving injections if the skin at the site of injection is compromised by any local infection such as a skin lesion, cut, or weeping dermatitis.

Use sterile injection equipment, every time

- Always use AD syringes for each injection and a new disposable syringe to reconstitute each vial of BCG, measles/MR and JE.

Prevent the contamination of vaccine and injection equipment

- Prepare each injection in a designated clean area where contamination from blood or body fluid is unlikely.
- If the injection site is dirty, clean it with clean swab.
- Always pierce the rubber cap (septum) of the vial with a sterile needle.
- Do not touch the needle or rubber cap (septum) of a vial with your finger.
- Follow product-specific recommendations for use, storage and handling of a vaccine.
- Discard any needle that has touched any non-sterile surface.

Assume all used equipment is contaminated

- Cut the used syringe with the hub cutter immediately after use.

Practice safe disposal of all medical sharps waste

- Used sharps (needles) must be collected in a hub cutter and then carried to the PHC for safe disposal.

Prevent needle-stick injuries

- Do not re-cap or bend needles.
- Anticipate sudden movement of the child.
- Collect sharps in a puncture-proof container (hub cutter).

Correct use of AD syringes (Fig 5.2)

Fig. 5.2. Correct use of AD syringes

	1. Select the correct syringe for the vaccine to be administered – 0.1ml for BCG, fIPV and 0.5ml for all others.
	2. Check the packaging. Don't use if the package is damaged, opened, or expired.
	3. Peel open or tear the package from the plunger side and remove the syringe by holding the barrel. Discard the packaging into a **black** plastic bag.
	4. Remove the needle cover/cap and discard it into the black plastic bag. 5. Do not move the plunger until you are ready to fill the syringe with the vaccine and do not inject air into the vial as this will lock the syringe.
	6. Take the appropriate vaccine vial, invert the vial, and insert the needle into the vial through the septum. Insert the needle such that the tip is within the level of the vaccine. If inserted beyond that, you may draw an air bubble which is very difficult to expel. 7. **Do not touch the needle or the rubber cap (septum) of the vial.**
	8. Pull the plunger back slowly to fill the syringe. The plunger will automatically stop when the necessary dose of the vaccine has been drawn (0.1 ml or 0.5 ml). 9. **Do not draw air into the syringe.** In case air accidentally enters the syringe, remove the needle from the vial. Holding the syringe upright, tap the barrel to bring the bubbles towards the tip of syringe. Then carefully push the plunger to the dose mark (0.5 or 0.1 ml) thus expelling the air bubble. 10. Clean the injection site (if dirty) with a clean swab.

11. Administer the vaccine, as follows:

- **BCG:** upper arm **LEFT**
- **DPT and Hep B:** Anterolateral aspect (outer side) of mid-thigh **LEFT**
- **Pentavalent:** Anterolateral aspect of mid-thigh **LEFT**
- **fractional IPV:** Upper arm **RIGHT**
- **PCV:** Anterolateral aspect of mid-thigh **RIGHT**
- **MR:** Upper arm **RIGHT**
- **TT:** Upper arm **RIGHT**
- **JE:** upper arm **LEFT.**

12. Push the plunger completely to deliver the dose. **Do not rub the injection site after vaccine is given.**

13. **Do not re-cap the needle.** Cut the hub of the syringe immediately after use with hubcutter that collects the sharps in its puncture proof container.

14. Then collect the plastic portion of the cut syringes in a red plastic bag.

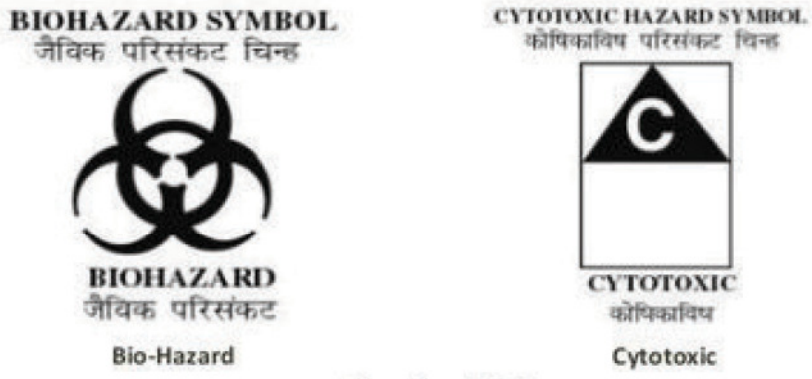
Follow the guidelines for waste disposal as given in next section.

Steps to ensure safe disposal of immunization waste

The CPCB outlines guidelines for disposal of biomedical waste generated during immunization under the UIP. The concerned CMO/DHO or the officer responsible for implementation of UIP in the respective area, as decided by the MoHFW, will obtain authorization from the "Prescribed authority" notified under the Biomedical Waste (Management & Handling) Rules for generating, collecting, receiving, storing, transporting, treating, disposing and/or handling biomedical waste in any other manner.

Biohazard and cytotoxic symbols are given in Fig. 5.3.

Fig. 5.3. Biohazard and cytotoxic symbols



Disposal of biomedical waste generated at outreach points/PHCs/CHCs/ district hospitals, etc. (refer Fig. 5.6)

Step 1: At the session site, ANMs to cut the needle of the AD syringe immediately after administering the injection using the hub cutter that cuts the plastic hub of the syringe and not the metal part of needle. The cut needles will get collected in the puncture-proof container of the hubcutter (Fig. 5.4).

Step 2: Store the broken vials in a separate white sturdy and puncture proof container or in the same hubcutter, in case its capacity is also able to accommodate broken vials.

Step 3: Segregate and store the plastic portion of the cut syringes and unbroken (but discarded) vials in the red bag or container. Both the containers should bear the biohazard symbol as stipulated in Schedule III of the Bio-Medical Waste (BMW) Rules (Fig. 5.3).

Step 4: Send the red, black bag and the hub cutter to PHC for disinfection (see fig. 5.5) and disposal by the designated person at the PHC. Dispose of the black bag as general waste. PHC may send the collected materials to the Common Biomedical Waste Treatment Facility (CBWTF). If the CBWTF doesn't exist, go to Step 5.

Step 5: Treat the collected material in an autoclave. If unable to impart autoclaving, boil the waste in water for at least 10 minutes or provide chemical treatment using sodium hypochlorite for 30 minutes to ensure that this results in disinfection. However, the district hospital/CHC/PHC will ultimately make the necessary arrangements to autoclave on a regular basis.

Step 6: Dispose the autoclaved (or boiled/chemically disinfected) waste as follows:

- Dispose the needles and broken vials in a safety pit/tank
- Send the syringes and unbroken vials for recycling or to a landfill.

Step 7: Wash the hub cutters properly with sodium hypochlorite before reuse.

Step 8: Maintain a proper record of generation, treatment and disposal of waste at the district hospital/CHC/PHC in order to assess that waste (needles/syringes/vials) reported back matches with the stock issued to HWs at the beginning of the session day. Match by weighing rather than counting to avoid occupational and safety hazards. This helps to prepare annual reports, submitted to the prescribed authority by 31 January of every year.

Fig. 5.4. Using the hub cutter correctly

Fig. 5.5. Pictorial flow chart – disinfection and disposal sharps waste from RI session

Fig. 5.6. Pictorial guide – segregation and safe disposal methods for immunization waste

Red/black plastic bags

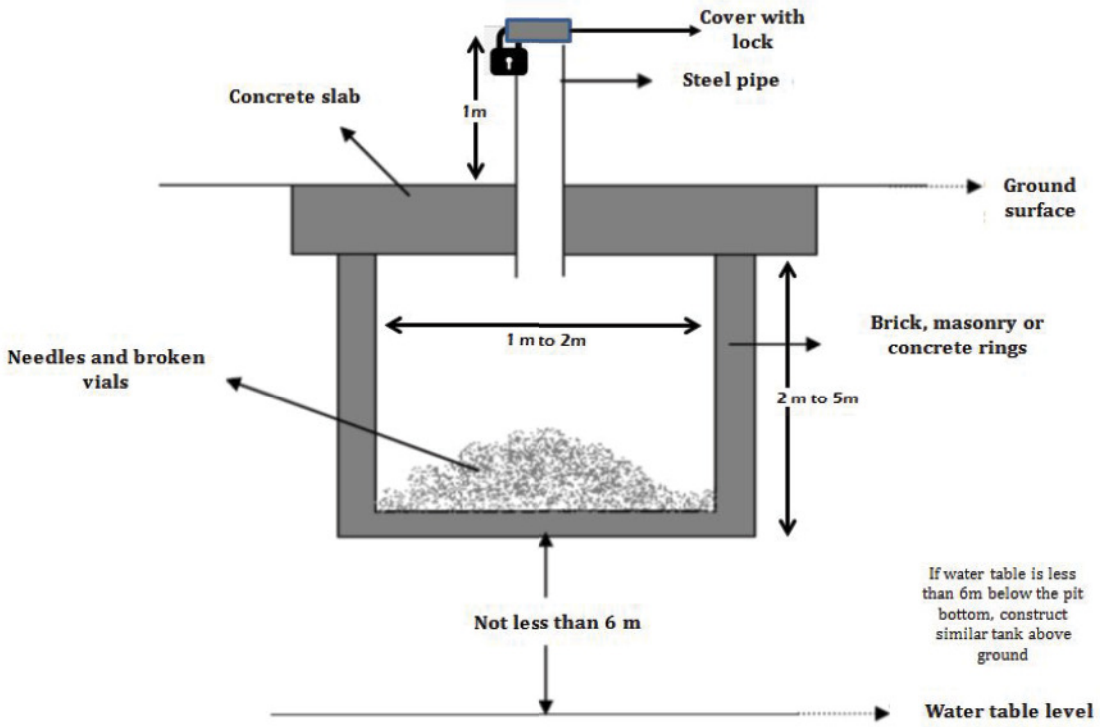
30 Liters (24'' x 28'') (biodegradable) HDPE/LLDPE/PP bags made with virgin, non-chlorinated polymer material with minimum thickness of 55 micron, with easy to hold collar tie/knot arrangement and preprinted as per requirements of Bio Medical Waste Management Rules are to be used.

Final disposal at PHC/UHC/CHC of treated needles and broken vials (sharps)

Treated needles/broken vials should be disposed of in a circular or rectangular pit as shown in Fig. 5.7. Such a rectangular or circular pit can be dug and lined with brick, masonry or concrete rings. The pit should be covered with a heavy concrete slab, which is penetrated by a galvanized steel pipe projecting for about 1 m above the slab, with an internal diameter of up to 50 mm or 1.5 times the length of vials, whichever is more. The top opening of the steel pipe shall have a provision for locking after the treated waste sharps have been disposed.

When the pit is full, it can be sealed completely after another one has been prepared. For high water-table regions where the water table is less than 6 meters beneath the bottom of the pit, a tank with above mentioned arrangements shall be made above the ground.

Fig. 5.7. Design of the pit/tank for disposal of treated needles and broken vials (sharps)



Your role in safe injections, safety of staff and waste management

Medical Officer's role	Activity	How
Ensuring safe injections by health workers	1. Ensuring availability and maintenance of logistics needed for safe injections 2. Ensuring all ANMs both in the field and in health centre are aware and practice injection safety	Use the opportunity during field visits to RI session sites
Further develop and guide safe practices	1. Review of waste segregation and management with all staff to identify issues 2. Involvement of waste handlers	Discuss during meetings and involve all staff
Ensure existing waste management is adequate and in line with guidelines	1. Is at source segregation of waste being practiced at all levels? 2. Ensuring availability of proper logistics 3. Making sure the injection pit and waste storage areas are as per guidelines	When on rounds of hospital or visiting any other department in your centre
Ensuring safe final disposal of waste	1. Ensure timely collection of segregated waste from your health centre. Report delays to district. 2. Ensure safe storage of segregated waste before final disposal 3. Review functioning of sharps pit / landfill	Discuss issues during district level meetings or contact district immediately when issues arise

Global research in new vaccine delivery methods

- **Intra dermal delivery** – Jet injectors, Micro needles,
- **Needle free vaccines delivery** – Needle free patch, inhaled vaccines
- **Transcutaneous route**

Notes...

Notes...