



# Warehouse Monitoring Checklist

Expanded Programme on Immunization

Ministry of National Health Services, Regulations and Coordination,  
Government of Pakistan





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## Acronyms

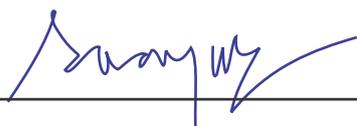
EPI	Expanded Programme on Immunization
FEFO	First-Expiry, First-Out
PPE	Personal Protective Equipment
QMS	Quality Management System
SAR	Supplies Arrival Report
USAID	U.S. Agency for International Development
VAR	Vaccine Arrival Report
VVM	Vaccine Vial Monitor
vLMIS	Vaccine Logistics Management Information System
WMS	Warehouse Management System



## Foreword

A checklist is an important tool for effective monitoring and evaluation (M&E). This checklist was developed to ensure that all important aspects of the various functions at the Federal Expanded Programme on Immunization (EPI) Warehouse Islamabad are considered. It is hoped that the application of a standardized checklist will help the EPI Warehouse assess its work against key performance indicators and ensure that best warehousing practices and procedures are followed. Moreover, the checklist can help the EPI warehouse determine if it has delivered against strategic priorities, met service delivery obligations and key stakeholder expectations; and, therefore, reduced key risk indicators. This will also help the project assess what is working and what is not working, make adjustments to plans and strategies, and address new workforce and organizational issues that may arise. It is hoped that the staff will use the checklist in all their M&E efforts.

We wish to convey our sincere appreciation for the generous technical and financial assistance extended by the U.S. Agency for International Development (USAID) through the USAID | DELIVER PROJECT in Pakistan for strengthening health supply chain logistics systems for the Government of Pakistan and for enabling the development of this checklist.



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**Mr. Muhammad Ayub Sheikh**  
Secretary Health,  
Ministry of National Health Services Regulations & Coordination  
Islamabad



## Acknowledgment

The modern world has given us stupendous know-how. Yet, avoidable failures continue to plague us in almost every realm of organized activity. The volume and complexity of work at the Federal EPI in Islamabad has consistently increased, transforming it into a key specialized national facility to distribute vaccines across the country. With an ever-advancing scope of work, the Federal EPI today is challenged to deliver consistently, correctly, and safely.

It is in this context that the development of the *Warehouse Monitoring Checklist* becomes an important initiative. As an excellent informational job aid, it will directly facilitate staff to ensure important steps, procedures, and tasks are not overlooked or missed in its daily work of inventory management, as stocks are delivered across Pakistan. This will contribute greatly to the day-to-day functions, and will help in performance monitoring of both the human resource, as well as the cold chain equipment, to improve efficiency and effectiveness at the facility.

The *Warehouse Monitoring Checklist* has been made possible through the generous support of the USAID | DELIVER PROJECT. The Ministry of National Health Services, Regulations and Coordination appreciates the timely and constructive support of USAID | Pakistan in strengthening, rehabilitation, and upgrading of the Federal EPI Warehouse Islamabad to improve the warehouse management system, as per international standards.

We wish to also express our appreciation to Dr. Muhammad Tariq, Country Director, USAID | DELIVER PROJECT in Pakistan for his leadership role; and his dedicated team for their efforts and support in developing the *Warehouse Monitoring Checklist*.



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**Dr. Assad Hafeez,**  
Director General, Ministry of National  
Health Services, Regulations & Coordination  
Islamabad.



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**Dr. Syed Saqlain Ahmed Gilani**  
National Programme Manager  
Federal EPI Cell, Islamabad

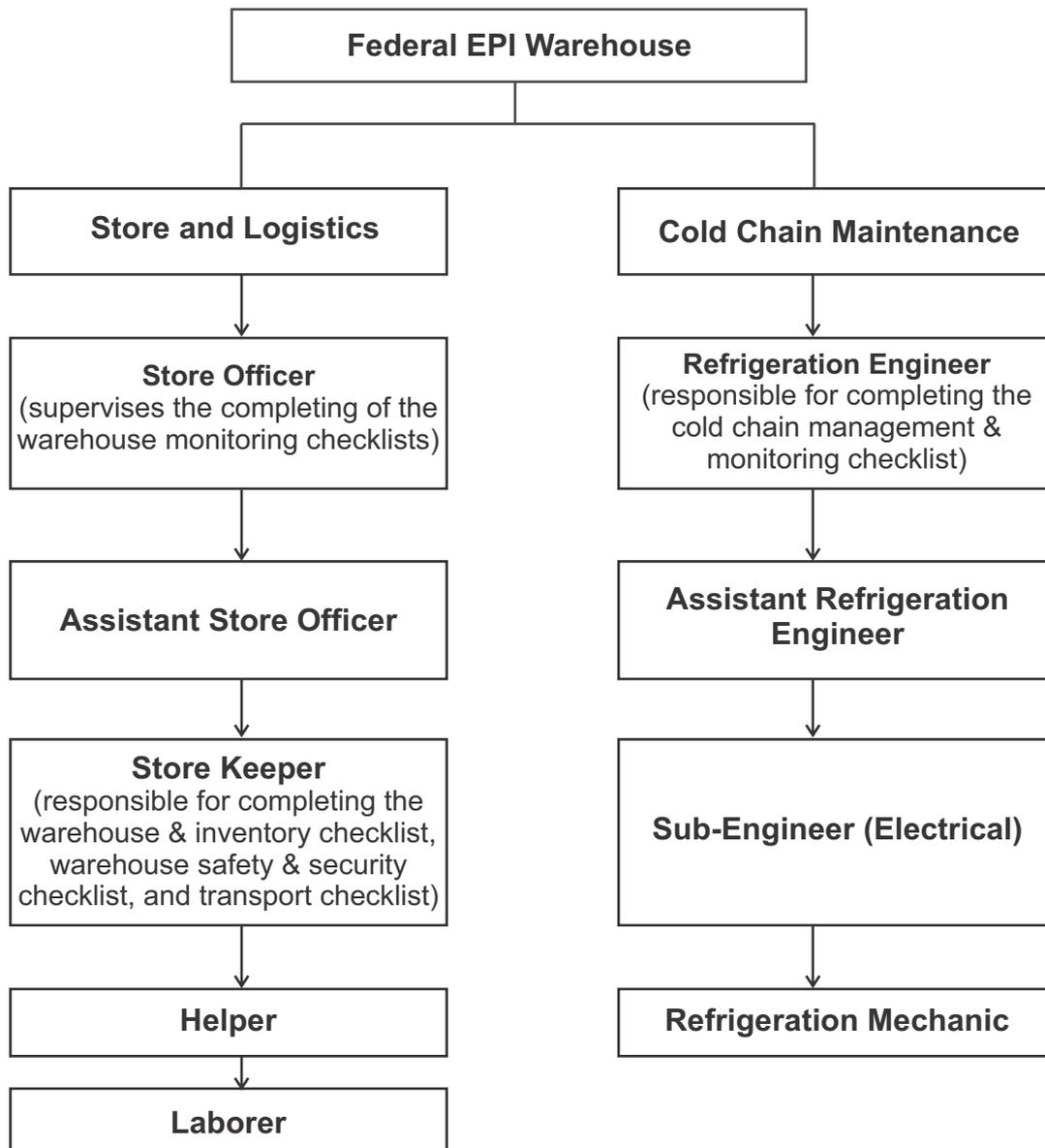


# Introduction

Monitoring of a program or intervention involves the collection of routine data that measure progress toward achieving program objectives. This is used to track changes in program performance over time. Its purpose is to permit stakeholders to make informed decisions regarding the effectiveness of programs and the efficient use of resources. An evaluation measures how well the program activities have met expected objectives and/or the extent to which changes in outcomes can be attributed to the program or intervention.

The *Warehouse Monitoring Checklist* contributes greatly to the day-to-day functions, and it will help in monitoring the performance of both the human resource, as well as the cold chain equipment. Its adherence will not only improve efficiency and effectiveness at the facility, but will also prevent a re-occurrence of unwanted events. Relevant staff will complete the monitoring checklist on a monthly basis (see figure 1).

**Figure 1: Federal EPI Warehouse Organogram**



# ISO Requirements and Compliance

ISO certification requires planning and implementing the monitoring, measurement, analysis, and improvements needed for the following objectives:

- To ensure conformity to product requirements.
- To ensure conformity of the Quality Management System (QMS).
- To continually improve the effectiveness of the QMS.

Monitoring and evaluation in the context of QMS of ISO is required for performance measurement, and for taking corrective measures. To gauge the performance of the QMS, the following measures must be taken:

- Customer satisfaction
- Internal audit
- Monitoring and measurement of processes
- Monitoring and measurement of product
- Control of non-conforming product.

The ISO requires the organization to ensure that any product that does not conform to product requirements is identified and controlled to prevent its unintended use or delivery.

## **Data Analysis:**

As per requirement, the organization shall determine, collect, and analyze appropriate data to demonstrate the suitability and effectiveness of QMS.

## **Improvement:**

Improvement, as per standards, can be ensured through continual improvement and by taking corrective and preventive actions.

# Federal EPI Warehouse Monitoring and Evaluation Checklist

## 1. Warehousing and Inventory Management Checklist

Date from: \_\_\_\_\_ Date to: \_\_\_\_\_

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

Next inspection date: \_\_\_\_\_

NS= Not sure

NA= Not applicable

#	Warehousing and Inventory Management	Responsible Person		Evidence	Yes	No	NS	NA	Conclusion/Remarks
		Name	Designation						
1	Designated staff receives the stock and properly reviews all shipment documents.								
2	For received stock, the physical count is reconciled with the shipment documents.								
3	Received stock of vaccines and data loggers are checked								
4	Received stock is physically checked for VVM, expiry, quantity, quality, and packing								
5	For received stock, damages, losses, errors, and discrepancies are reported.								
6	For received stock, shipment checklist is properly filled out and completed.								
7	All the details for the received stock is recorded in VAR and SAR.								

#	Warehousing and Inventory Management	Responsible Person		Evidence	Yes	No	NS	NA	Conclusion/Remarks
		Name	Designation						
8	For received stock, the shipment with barcodes on the cartons are scanned; updates are made in the WMS/vLMIS.								
9	For received stock, racks and items are named accordingly and reported in the WMS/vLMIS.								
10	Stock received is shown in the WMS/vLMIS by location, racks, and pallets.								
11	Designated staff can report in the WMS/vLMIS the received quantity/ vials, by vaccine, lot, location, and rack in the warehouse/cold room.								
12	Stock received is shown in the correct quantity and product name in the bin cards and stock cards.								
13	Designated staff receiving the stock understand and follow the receiving procedures and systems.								
14	Designated staff are properly trained to receive stock and report.								
15	Designated staff know the loss and damages policy for reporting.								

#	Warehousing and Inventory Management	Responsible Person		Evidence	Yes	No	NS	NA	Conclusion/Remarks
		Name	Designation						
16	Designated staff have all required stationery and equipment to do their work efficiently.								
17	Designated staff have the proper manuals and warehouse operating forms.								
18	Staff know about and can use the various warehouse manuals and stock reporting forms.								
19	Vaccines and supplies requisitions are received on time for further action.								
20	Vaccines and supplies are dispatched, based on the requested quantity /vials.								
21	Vaccines and supplies are dispatched using the FEFO system.								
22	After vaccines and supplies are dispatched, a physical count is reconciled with the dispatched requisition.								
23	Dispatched vaccines and supplies are properly scanned and reported in the WMS/vLMIS.								

#	Warehousing and Inventory Management	Responsible Person		Evidence	Yes	No	NS	NA	Conclusion/Remarks
		Name	Designation						
24	Designated staff can report in the WMS/vLMIS the dispatched vaccines and supplies by stakeholder, district, and province.								
25	Dispatched vaccines and supplies have proper stock issuing vouchers and gate passes.								
26	Vaccines and supplies dispatched are updated in the bin cards and stock cards.								
27	Designated staff can report daily and print vaccines and supplies stock sufficiency reports through the WMS/vLMIS.								
28	All vaccines and supplies received and dispatched are correctly reported in the WMS/vLMIS.								
29	Designated staff regularly report and update the WMS/vLMIS.								
30	Designated staff manage vaccines and supplies in the WMS/vLMIS using the FEFO system.								
31	Designated staff manage inventory by location, rack, and pallet or shelves in the cold room or dry store.								

#	Warehousing and Inventory Management	Responsible Person		Evidence	Yes	No	NS	NA	Conclusion/Remarks
		Name	Designation						
32	Designated staff can identify the stock location, rack, and pallet for each vaccine or supply in the warehouse in the WMS/vLMIS.								
33	All warehouse operating equipment—stackers, forklifts, computers, etc. are in working condition and are well maintained.								
34	All the WMS/vLMIS equipment is running smoothly, and is kept and maintained in good condition.								
35	All features of WMS/vLMIS are working appropriately and are error free.								
36	Vaccine stock sufficiency reports are signed by the relevant EPI Warehouse authority and properly maintained in files.								
37	Designated staff have taken precautionary measures to safeguard stock from rodents, insects, loss, and damages.								



## 2. Warehousing Safety and Security Checklist

Date from: \_\_\_\_\_ Date to: \_\_\_\_\_

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

Next inspection date: \_\_\_\_\_

NS= Not sure  
NA= Not applicable

#	Warehouse Safety and Security	Responsible Person		Evidence	Yes	No	NS	NA	Conclusion/Remarks
		Name	Designation						
1	Are all warehouse exits clearly marked and clear of obstructions (barriers)?								
2	Are the warehouse aisles clear of storage?								
3	Are all pallets, racks, and shelving in good condition and undamaged?								
4	Are all materials stacked properly and are not leaning?								
5	Are guardrails (sign of dangerous area) present in areas of overhead storage above offices or platform?								
6	Are material handling equipment in place and available?								
7	Do stacker operators get proper training to operate the stacker or forklift?								

#	Warehouse Safety and Security	Responsible Person		Evidence	Yes	No	NS	NA	Conclusion/Remarks
		Name	Designation						
8	Are horns used during backing, blind corners, and other potentially dangerous situations?								
9	Do forklifts travel at a safe speed?								
10	Do operators wear seat belts?								
11	Are keys removed and forks lowered when the forklifts are parked?								
12	Are stackers charged in a place free from combustibles and with adequate ventilation?								
13	Are fire extinguishers placed in each area of the warehouse and are they accessible?								
14	Are fire extinguishers checked monthly?								
15	Are flammable and combustible materials stored in flammable-proof storage cabinets?								
16	Is adequate equipment available to minimize employees lifting heavy or awkward objects?								
17	Are electrical outlets, junction boxes, and other electrical components properly covered?								

#	Warehouse Safety and Security	Responsible Person		Evidence	Yes	No	NS	NA	Conclusion/Remarks
		Name	Designation						
18	Are extension cords in good repair, properly grounded, etc.?								
19	Are panel box doors labeled and closed?								
20	Are individually keyed locks and tags available for lock and lockout tags of equipment?								
21	Are equipment-specific lock and lockout tag procedures available?								
22	Is PPE available and in good condition								
23	Do employees know when to wear PPE?								
24	Do designated staff randomly check the warehouse fire-fighting system?								
25	Do designated staff maintain the warehouse building in good condition?								
26	Do designated staff monitor the night and day security guards to ensure warehouse security?								
27	Do designated staff properly lock the warehouse main doors and main exit gate?								
28	Does the gatekeeper / guard register visitor information, as required?								
29	Does the gatekeeper/ guard check incoming and outgoing stock documentation and registering information?								



### 3. Cold Chain Maintenance and Monitoring Checklist

Date from: \_\_\_\_\_ Date to: \_\_\_\_\_

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

Next inspection date: \_\_\_\_\_

NS= Not sure  
NA= Not applicable

#	Cold Chain Maintenance and Monitoring	Responsible Person		Evidence	Yes	No	NS	NA	Conclusion/Remarks
		Name	Designation						
1	Does the EPI store have designated staff in charge of vaccines and biologics?								
2	Is the designated staff properly trained on vaccine and biologics cold chain maintenance protocols?								
3	Do EPI stores have a designated backup staff to check the vaccine and biologics cold chain maintenance protocols?								
4	Are all staff properly trained on vaccines and biologics storage and handling protocols?								
5	Does the EPI store have a—purpose-built (lab style) refrigerator? or domestic (freezer compartment with a separate external door)?								

#	Cold Chain Maintenance and Monitoring	Responsible Person		Evidence	Yes	No	NS	NA	Conclusion/Remarks
		Name	Designation						
6	Does the designated staff take corrective action when the temperature is out of range?								
7	Does the designated staff record the temperature level of the freezer / refrigerator cold room in the temperature log, at least twice a day?								
8	Does the designated staff ensure, daily, that the refrigerator / refrigerated cold room temperature is within the range of 2–8°C for positive cold rooms?								
9	Does the designated staff ensure, daily, the freezer/freezer cold room temperature is -15°C or colder for negative cold rooms?								
10	Does the designated staff know who to call if the refrigerator / refrigerated cool room temperature is out of range?								
11	Does the EPI store have “DO NOT UNPLUG” and “Warning” notices next to the refrigerator's electrical outlet and at the circuit breakers?								
12	Does the designated staff follow standard cold chain inventory management protocols?								

#	Cold Chain Maintenance and Monitoring	Responsible Person		Evidence	Yes	No	NS	NA	Conclusion/Remarks
		Name	Designation						
13	Does the designated staff store the vaccines and biologics in the middle shelves of the refrigerator/ refrigerated cold room shelves?								
14	Is the instruction available on the refrigerator/ refrigerated/freezer cold room door showing how the different vaccines refrigerator/refrigerated/freezer cold rooms should be organized?								
15	Does the designated staff understand the instructions on the refrigerator/ refrigerated/freezer cold room door that shows how the vaccine refrigerator should be organized?								
16	Every time after the refrigerator/refrigerated/freezer cold room door is opened, does the designated staff ensure that it is properly closed and locked?								
17	Does the designated staff check the stock expiration date and use the stock that will expire first?								
18	Does the designated staff rotate vaccines stock (newest stock is placed behind stock with the shortest expiry date)?								

#	Cold Chain Maintenance and Monitoring	Responsible Person		Evidence	Yes	No	NS	NA	Conclusion/Remarks
		Name	Designation						
19	Does the designated staff understand and apply the protocols / guidelines for storing and handling vaccines and biologics?								
20	Is the capacity of the cold chain equipment (ice-lined refrigerators, ice boxes) sufficient for vaccine storage?								
21	Is a process in place to manage times when the temperature exceeds the maximum or minimum from the recommended level of temperature?								
22	Does the EPI store have technical assistance for vaccine when the temperature exceeds minimum or maximum stability or related issues?								
23	Does the designated staff follow the standard procedure practices for waste disposal?								
24	Is vaccine transported in a temperature-monitored vehicle?								
25	Are vaccine packs in the insulated container (box) and is ice packed correctly and placed in the insulated container when dispatching vaccine for distribution?								

#	Cold Chain Maintenance and Monitoring	Responsible Person		Evidence	Yes	No	NS	NA	Conclusion/Remarks
		Name	Designation						
26	Does the designated staff know the appropriate protocols for vaccine transportation; do they follow set protocols while transporting vaccines?								
27	Are diluent, syringes, and safety boxes received in cardboard cartons?								
28	Are all diluents, syringes, and safety boxes properly stacked on pre-assigned pallet bays?								
29	Are diluent, syringes, and safety boxes stacked on allocated pallet bays by batch number and expiry date?								
30	Are the WHO pre-qualified electronic calibrated temperature monitoring devices in place in the refrigerator / refrigerated / freezer cold rooms?								
31	Do the temperature control devices have an alarm system; is it in working condition?								
32	Is the temperature low alarm set for vaccine or diluent when it is exposed to -5.5°C or below?								
33	Is the temperature high alarm set for vaccine or diluent if it is exposed to +8°C or above?								

#	Cold Chain Maintenance and Monitoring	Responsible Person		Evidence	Yes	No	NS	NA	Conclusion/Remarks
		Name	Designation						
34	Does the concerned designated staff at the EPI store know the shake test protocols for the pentavalent, pneumococcal, and tetanus/typhoid vaccine?								
35	Does the designated staff keep all cold / freezer rooms keys in a safe place?								
36	Does the designated staff check the cold chain technical aspects daily, weekly, and monthly?								
37	Does staff wear the protecting cloth for excessive cold when they enter the cold / freezer rooms?								
38	Does the designated staff use the required schedule to check the vaccine vial monitor?								

### 4. Transport Checklist

Date from: \_\_\_\_\_ Date to: \_\_\_\_\_

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

Next inspection date: \_\_\_\_\_

NS= Not sure  
NA= Not applicable

#	Transport	Responsible Person		Evidence	Yes	No	NS	NA	Conclusion/ Remarks
		Name	Designation						
1	Does the driver check the oil level daily?								
2	Does the driver check the hoses monthly?								
3	Does the driver check all the belts monthly?								
4	Does the driver check the tire pressure daily?								
5	Does the driver check coolant/antifreeze monthly?								
6	Does the driver change the air filter, based on the recommended mileage?								
7	Does the driver change the engine oil, based on the recommended mileage?								
8	Does the driver change the oil filter, based on the recommended mileage?								
9	Does the driver check the brake fluid every 3 months?								
10	Does the driver check the battery water level weekly?								

#	Transport	Responsible Person		Evidence	Yes	No	NS	NA	Conclusion/ Remarks
		Name	Designation						
11	Does the driver check the steering fluid every 3 months?								
12	Does the driver check the headlights daily?								
13	Does the driver have a spare tire in the vehicle?								
14	Does the driver know the basic government traffic rules and regulations?								
15	Does the driver carry the required documents, license, vehicle registration book, etc.?								
16	Are the vehicles available and in working condition when needed?								
17	Does the driver maintain the vehicle logbook properly?								
18	Does the driver maintain the vehicle fuel book properly?								
19	Is vaccine transported in a temperature-monitored vehicle?								
20	Does your practice have a dedicated and validated cool box for transporting the vaccines to the field or in the store?								
21	To ensure the required temperature is maintained throughout the transport, does the designated staff in the EPI store use a temperature monitoring devices to check the cold chain for the vehicles?								

#	Transport	Responsible Person		Evidence	Yes	No	NS	NA	Conclusion/ Remarks
		Name	Designation						
22	Does the driver know the required temperature that must be maintained in the cold chain truck while transporting the vaccines and diluents?								
23	Does the driver know the vaccine and diluent transportation protocols?								
24	Does the driver know how to respond if the refrigeration unit fails?								
25	Does the driver know the backup plan if the refrigeration unit fails?								





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