



Warehouse Monitoring Checklist

Federal Directorate of Immunization
Ministry of National Health Services,
Regulations and Coordination,
Government of Pakistan



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Federal Directorate of Immunization





Disclaimer

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USAID Pakistan Supply Chain Cooperation Standards and Policies can be found at:
<https://v.lmis.gov.pk/docs/pakistan-supplychain-sops>

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Acronyms

FDI	Federal Directorate of Immunization
FEFO	First-Expiry, First-Out
M/oNHSR&C	Ministry of National Health Services, Regulations and Coordination
PPE	Personal Protective Equipment
QMS	Quality Management System
SOPs	Standard Operating procedures
SAR	Supplies Arrival Report
ISO	International Organization for Standardization
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

Acknowledgment

The volume and complexity of work at the Federal Directorate of Immunization (FDI), Ministry of National Health Services, Regulations, and Coordination Islamabad has increased consistently, transforming it into a key specialized national facility for procurement, storing, and distribution of vaccines across the country. With an ever-advancing scope of work, the FDI needs to regularly monitor its supply chain and logistics activities by adopting a robust monitoring mechanism for smooth implementation of immunization activities in the country. In this context the development of the *Warehouse Monitoring Checklist* becomes an important initiative.

The FDI highly appreciates the valuable support extended by USAID/Pakistan towards sustainable immunization supply chain system strengthening in the country. We thank Mr. Bradley Cronk, Director Health Office, USAID/Pakistan for his leadership in successfully strengthening, rehabilitating, and upgrading the FDI Warehouse in Islamabad to improve warehouse management system as per the international standards.

We express our gratitude to Dr. Muhammad Tariq, Country Director, USAID funded GHSC-PSM project in Pakistan for his leadership role and his dedicated team for their effort and support in developing the *Warehouse Monitoring Checklist*.



Dr. Muhammad Ahmed Kazi
Director General,
Federal Directorate of Immunization, Islamabad

Preface

The main purpose of this manual is to incorporate a checklist that serves as a vital tool to establish an effective monitoring and evaluation (M&E) mechanism. The checklist has been carefully designed to ensure that all the essential aspects of various functions at the FDI Warehouse, Islamabad are well-maintained. It encompasses warehousing, inventory management, safety and security, cold chain maintenance, monitoring, and supervision, as well as transportation system.

The Warehouse Monitoring Checklist greatly contributes to the day-to-day operations of the facility. It assists in monitoring the performance of both the staff and the cold chain equipment. By adhering to this checklist, the FDI can not only enhance efficiency and effectiveness within the facility but also prevent the recurrence of unwanted events. Besides this, through proper implementation of this checklist, FDI can ensure that the facilities operate smoothly, safeguarding valuable vaccines /supplies.

This document serves as a comprehensive guide for monitoring warehouse operations and ensuring the smooth functioning of the immunization supply chain. These checklists will help to promote accountability and transparency in immunization program management. I strongly believe that this resource will be of immense value to all those involved in the storage and distribution of vaccines throughout Pakistan.

I would like to express my sincere gratitude to the leadership support provided by USAID/Pakistan, particularly Mr. Bradley Cronk, USAID Director Health Office, Dr. Shabir Chandio, Mr. Khalid Mahmood, Mr. Sherif Mowafy, Mr. John Vivalo, Mr. Keith Hummel, and Mr. Ramy Guirguis. Their efforts have been instrumental in strengthening, rehabilitating, and upgrading the FDI Warehouse in Islamabad to align with the international standards.



Dr. Muhammad Tariq

Country Director

USAID Global Health Supply Chain Program – Procurement and Supply Management

Introduction

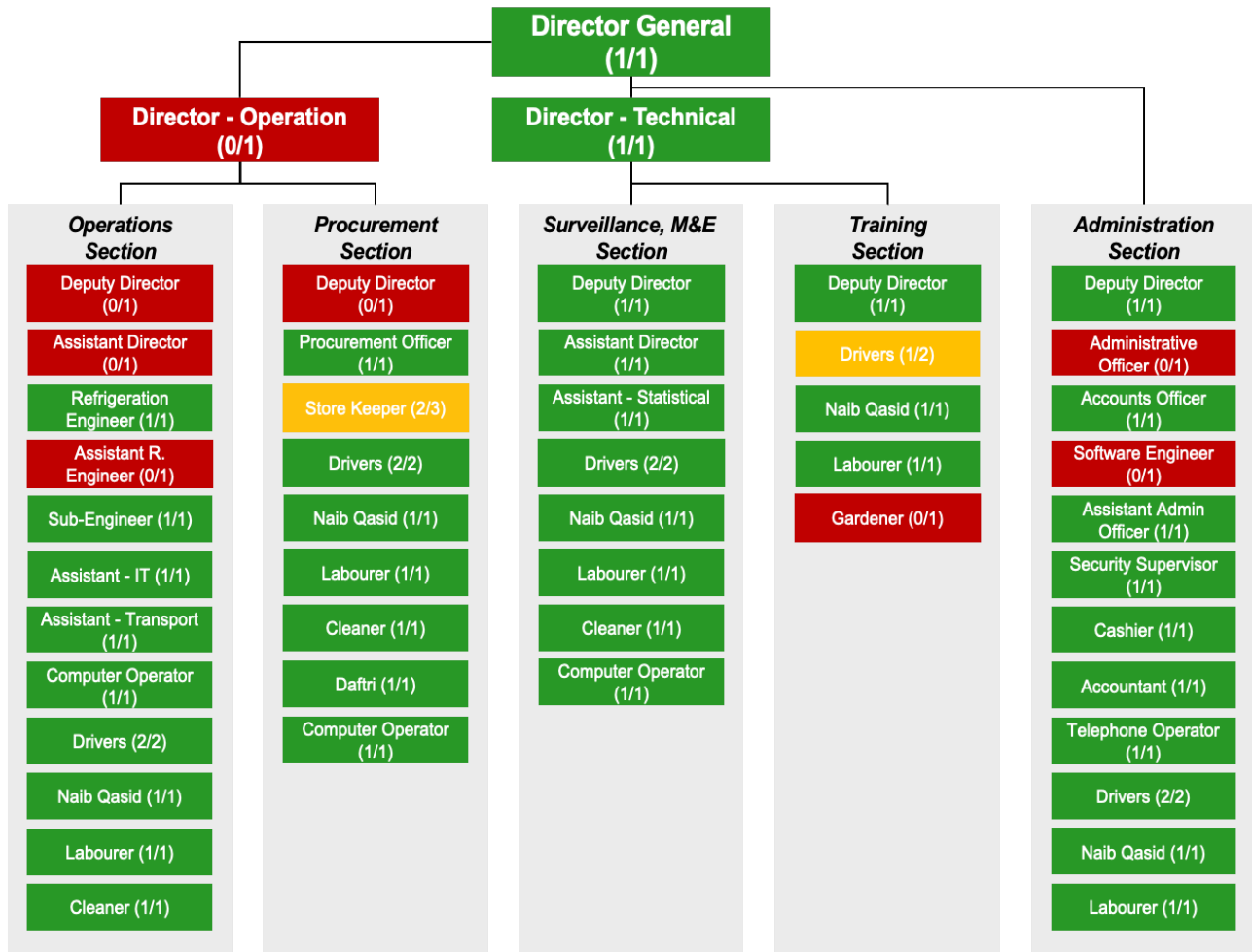
Monitoring of a program or intervention involves the collection of routine data that measure progress toward achieving program objectives. This is used to track changes in program performance over time. Its purpose is to permit stakeholders to make informed decisions regarding the effectiveness of programs and the efficient use of resources. An evaluation determines the extent to which changes in outcomes may be attributed to the programs or intervention, as well as how well the program activities have reached expected objectives. It's essential to regularly assess the warehouse management system to find areas for improvement and make sure it keeps up with the evolving requirements of the warehouse operations.

The Warehouse Monitoring Checklist contributes greatly to the day-to-day functions, it helps in monitoring the performance of both human resources, 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 monthly (see figure 1).

These checklists serve as a guide for conducting regular inspections and audits of the warehouses to ensure that they meet the necessary standards and regulations set by the government. They help to identify any potential risks, safety hazards, and areas for improvement within the warehouse operations. Through the Warehouse Monitoring Checklist, the FDI can ensure that facilities are operating properly, thereby protecting the valuable vaccines and other immunization supplies. These checklists also help to maintain accountability and transparency in the management of the immunization program.

The implementation of Warehouse Monitoring Checklists as a part of the FDI operations requires that the facilities meet certain standards and regulations. ISO certification requires a detailed assessment of the facilities, including a review of the Warehouse Monitoring Checklists and the procedures used to implement them. To ensure that warehousing remains ISO certified, all employees must strictly follow the established standard operating procedures (SOPs) in all aspects of storage, distribution, and inventory management. This includes proper storage conditions and inventory management practices to maintain a high level of efficiency and organization. By adhering to these SOPs, the FDI will be able to maintain ISO certification and continue providing the highest standard of service.

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.

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.								

#	Warehousing and Inventory Management	Responsible Person		Evidence	Yes	No	NS	NA	Conclusion/ Remarks
		Name	Designation						
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 details for the received stock is recorded in Vaccine Arrival Report (VAR) and Supplies Arrival Report (SAR).								
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 https://v.lmis.gov.pk/docs/pakistan-supplychain-sops								
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.								
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.								

#	Warehousing and Inventory Management	Responsible Person		Evidence	Yes	No	NS	NA	Conclusion/ Remarks
		Name	Designation						
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.								
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 FDI 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?								
7	Have the stacker operators received proper training to operate the stacker or forklift?								
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/helmet?								
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?								
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 personal protective equipment (PPE)—helmets, safety shoes, goggles, masks, and protective suits—available and are 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 FDI 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 FDI 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 FDI 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 record the temperature level of the freezer/refrigerator cold room in the temperature log, at least twice a day?								
7	Does the designated staff maintain the temperature record in any software (Next leaf app, programmable logistic controller tool etc.)								
8	Does the designated staff take corrective action when the temperature is out of range?								
9	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?								
10	Does the designated staff ensure daily the freezer/freezer cold room temperature is -15°C or colder for negative cold rooms?								
11	Does the designated staff know who to call if the refrigerator/refrigerated cool room temperature is out of range?								
12	Does the FDI store have “DO NOT UNPLUG” and “Warning” notices next to the refrigerator’s electrical outlet and at the circuit breakers?								
13	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						
14	Does the designated staff store the vaccines and biologics in the middle shelves of the refrigerator/ refrigerated cold room shelves?								
15	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?								
16	Does the designated staff understand the instructions on the refrigerator/ refrigerated/freezer cold room door that shows how the vaccine refrigerator should be organized?								
17	Every time after the refrigerator/refrigerated/ freezer cold room door is opened, does the designated staff ensure that it is properly closed and locked?								
18	Does the designated staff check the stock expiration date and use the stock that will expire first?								
19	Does the designated staff rotate vaccines stock (newest stock is placed behind stock with the shortest expiry date)?								
20	Does the designated staff understand and apply the protocols/guidelines for storing and handling vaccines and biologics?								

#	Cold Chain Maintenance and Monitoring	Responsible Person		Evidence	Yes	No	NS	NA	Conclusion/ Remarks
		Name	Designation						
21	Are these guidelines displayed in the warehouse?								
22	Is the capacity of the cold chain equipment (ice-lined refrigerators, ice boxes) sufficient for vaccine storage?								
23	Is a process in place to manage times when the temperature exceeds the maximum or minimum from the recommended level of temperature?								
24	Does the FDI store have technical assistance for vaccine when the temperature exceeds minimum or maximum stability or related issues?								
25	Does the designated staff follow the standard procedure practices for waste disposal?								
26	Are these SOPs for waste disposal on display?								
27	Is vaccine transported in a temperature-monitored vehicle?								
28	Are vaccine packs in the insulated container (box) and is ice packed correctly and placed in the insulated container when dispatching vaccine for distribution?								
29	Does the designated staff know the appropriate protocols for vaccine transportation; do they follow set protocols while transporting vaccines?								

#	Cold Chain Maintenance and Monitoring	Responsible Person		Evidence	Yes	No	NS	NA	Conclusion/ Remarks
		Name	Designation						
30	Are diluent, syringes, and safety boxes received in cardboard cartons?								
31	Are all diluents, syringes, and safety boxes properly stacked on pre-assigned pallet bays?								
32	Are diluent, syringes, and safety boxes stacked on allocated pallet bays by batch number and expiry date?								
33	Are the WHO pre-qualified electronic calibrated temperature monitoring devices in place in the refrigerator/refrigerated/freezer cold rooms?								
34	Do the temperature control devices have an alarm system; is it in working condition?								
35	Is the temperature low alarm set for vaccine or diluent when it is exposed to -5.5°C or below?								
36	Is the temperature high alarm set for vaccine or diluent if it is exposed to above temperature than the recommended range (cold room/freezer room)?								
37	Does the concerned designated staff at the FDI store know the shake test protocols for the pentavalent, pneumococcal, and tetanus/typhoid vaccine?								

#	Cold Chain Maintenance and Monitoring	Responsible Person		Evidence	Yes	No	NS	NA	Conclusion/ Remarks
		Name	Designation						
38	Does the designated staff keep all cold/freezer rooms keys in a safe place?								
39	Does the designated staff check the cold chain technical aspects daily, weekly, and monthly?								
40	Does staff wear the protecting cloth for excessive cold when they enter the cold/freezer rooms?								
41	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?								

#	Transport	Responsible Person		Evidence	Yes	No	NS	NA	Conclusion/ Remarks
		Name	Designation						
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?								
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?								

#	Transport	Responsible Person		Evidence	Yes	No	NS	NA	Conclusion/ Remarks
		Name	Designation						
20	Is there 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 FDI store use a temperature monitoring device to check the cold chain for the vehicles?								
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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