EPI Reforms at the Federal Stores: Optimizing Supply Chain Practices for Better Governance and Accountability

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Optimizing Supply Chain Practices for Better Governance and Accountability

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Abstract
In 2015, the USAID | DELIVER PROJECT supported a number of reforms for the supply chain operations at the federal Expanded Programme on Immunization stores in Pakistan. This report outlines the support activities and recommended actions going forward.

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Acronyms

CCTV	Closed Circuit Television
cLMIS	Contraceptive Logistic Management Information System
EPI	Expanded Program on Immunization
FEFO	First Expiry First Out
GOP	Government of Pakistan
GS1	Global Standard 1
ISO	International Standards Organization
LMIS	Logistic Management Information System
MoNHSR&C	Ministry of National Health Services, Regulations and Coordination
NTP	National TB Program
NGO	Non-governmental Organization
PC-1	Planning Commission-1 document
SOP	Standard Operating Procedures
TB-DMIS	Tuberculosis Drugs Management Information System
UC	Union Council
UNFPA	United Nations Population Fund
USAID	U.S. Agency for International Development
vLMIS	Vaccine Logistic Management Information System
VPPAG	Vaccine Presentation and Packaging Advisory Group
VSSM	Vaccine Supply Stock Management
VVM	Vaccine Vial Monitor
WHO	World Health Organization

ACKNOWLEDGEMENTS

The context of Pakistan, with very serious health indicators that threaten a bulging population and risk its social and economic well-being, has a vast potential to make course corrections and streamline its Health System in the post devolution scenario. This potential comprise of supportive policies, technical minds and the use of Information Technology, a combination of which has already demonstrated effective and sustainable change in other sectors.

Until end last year, no one suspected the state of working inside the Federal EPI stores. The important co-relation between the management of the stores and its direct link to stocks and vaccine-preventable diseases was not visible nor discussed. The incident in February 2015 of discovering 1.3 million doses of wasted Pentavalent vaccine vials turned to be a blessing in disguise, and triggered a series of reforms transforming the Federal EPI in Islamabad into an organized, well-governed storage and distribution facility. The impact of good governance has provided more transparency and hence more accountability. And most importantly these measures are changing the quality and quantity of required stocks on the ground – helping our people in delivering services, and saving lives!

I am grateful to a host of actors for bringing this transformation in a few months. Most significantly, Madam Saira Afzal Tarar, the Honorable Minister of State, Mr. Muhammad Ayub Sheikh, Secretary, and Dr. Assad Hafeez, Director General, Ministry of National Health Services, Regulations and Coordination, who personally visited the cold stores at the Federal EPI in February and March 2015 and provided strategic guidance and advicein various meetings on the way forward for making the facility effective and efficient in the delivery of its mandate. Support has come from friends for funding, for technical inputs and their administration, and for advocating the critical need at the required forums locally and internationally. I would like to thank Mr. Randolph Augustin, Director Health, USAID | Pakistan for the immediate financial assistance. Most importantly, I thank Dr. Muhammad Tariq, Country Director of USAID | DELIVER PROJECT, Mr. Ilyas Haider, Director Central Warehouse and Supplies, Karachi and their teams who with their specialization in Public Health Supply Chains provided the core technical and infrastructural inputs for the implementation of the conceived reforms. This daunting task of reforming Federal EPI was not possible without understanding, support and endorsementof the WHO, UNICEF, JICA, USAID and John Snow, Inc., as members of the reforms committee.

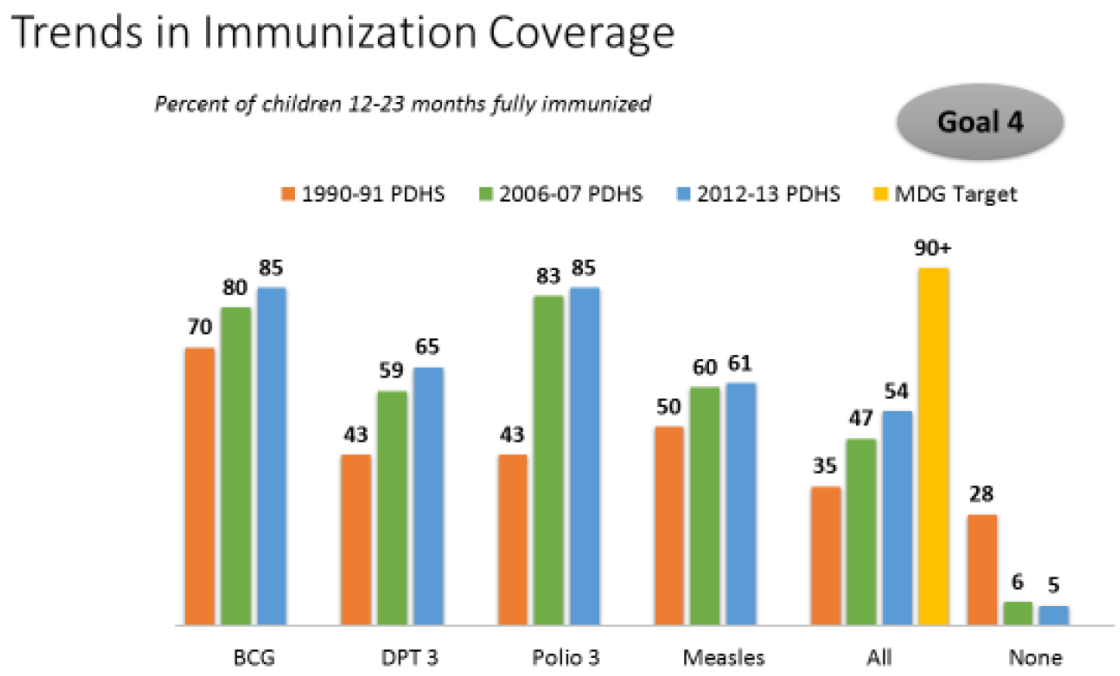
This report captures the background, the policy and operational steps taken, details of the parties that were engaged and the incredible impact all these had in a very short period of time in a public institution which had become used to a certain way of working over decades. The reforms are in a process of being implemented, and while it is important to review the progress to date, I would stress the need to focus on the recommendations and the way forward to ensure the momentum of what has been achieved is not lost and changes made are properly institutionalized. Clearly, the state-of-affairs downstream in the provincial level stores and below will need to be addressed if the links in the supply chain are to deliver benefits at the last mile.

Dr. Syed Saqlain Ahmad Gilani
National Program Manager
Federal EPI, Ministry of NHSR&C
Islamabad.

1 OVERVIEW

Pakistan is one of the major consumers of EPI vaccines in the world catering to a huge population and an accompanying growth rate. The total annual consumption of vaccines costs approximately Rs. 45 billion for Routine Immunization (RI) and Rs.6 billion for anti-polio campaigns, which are known as supplemental immunization activities. Unfortunately, in the past, limited attention has been given to establishing a functioning supply chain system across levels, particularly at the federal level. Vaccines worth billions of rupees have, therefore, remained un-accounted for resulting in sub-optimal immunization coverage. The Demographic Health Survey 2012-13 reports RI national coverage at only 54 percent (see figure 1). In addition to low coverage, the lack of performance accountability around vaccine supply chain and logistics, is also one of the causes of past outbreaks of vaccine preventable diseases.

Figure 1. Trends in Immunization Coverage



A similar case was observed in cold rooms and dry stores at the federal level. The storage facilities were severely lacking adherence to appropriate storage and distribution practices, resulting in unreliable inventories, weak systems, and means of establishing transparency and accountability.

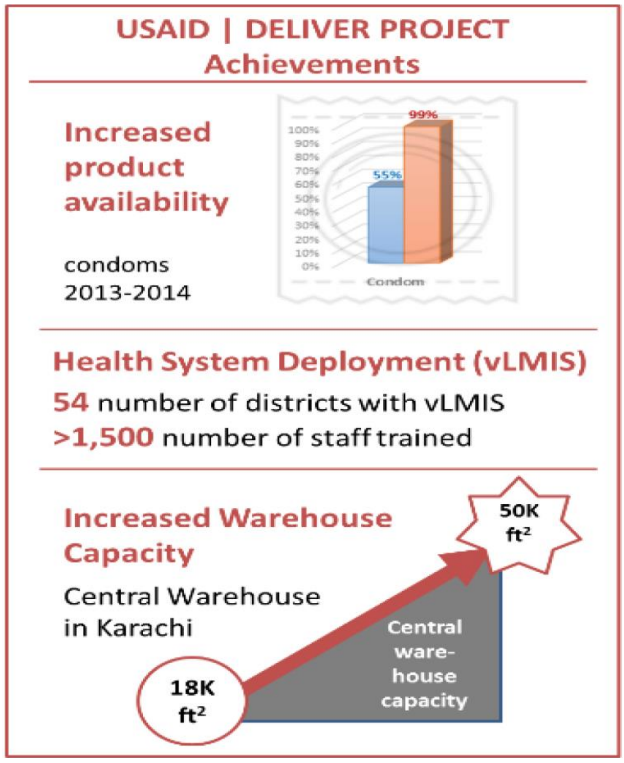
The Federal EPI program plays a pivotal role in national distribution of vaccines. The lessons learned from implementing RI include the need for a coordinated effort where technical capacity, robust accountability systems, and capable leadership of the Federal EPI program remain the corner stone of its country-wide mandate. International partners like World Health Organization (WHO) and United Nations Children's Fund (UNICEF) should continue to provide technical assistance in the requested strategic areas to support its performance.

Viewed on the backdrop of the Devolution Plan promulgated under the 18th Amendment in the Constitution of Pakistan, which empowers the federating units to implement health-related programs in accordance with their needs and the demands of their people, vaccine logistics management information system (vLMIS) is now a formally approved platform to give a vivid overview to the federal and provincial programs to plan their annual procurements of vaccines and cold chain equipment in line with their actual consumption, a realistic demand and immunization coverage. However, while the government has shown an unprecedented commitment to transform the institution, changing mindsets is a slow and tedious task, and the reforms introduced at the Federal EPI will take time to become integrated, and absorbed within its daily workings.

2 THE USAID | DELIVER PROJECT

The USAID | DELIVER PROJECT specializes in health commodities logistics and supply chain management, including forecasting, procurement, warehousing, distribution, and transportation to the last mile by utilizing Pakistan web-based logistics management information system (LMIS) (available at www.lmis.gov.pk) as the core tool for strengthening the logistics cycle. It began its operations in Pakistan in late 2009 to support the Government of Pakistan (GOP) and the USAID Pakistan Mission to improve public health supply chain management in the country through health systems strengthening. The project initially started with contraceptives and then moved to include other health commodities and vaccines aimed at improving supply chain management. It currently works closely with the public sector at all levels, including the Ministry of National Health Services, Regulations and Coordination (MoNHSR&C), provincial and regional Departments of Health and Population, GAVI, United Nations Population Fund (UNFPA), WHO, UNICEF, and nongovernmental organizations (NGOs), to ensure contraceptive and vaccine commodity security at each level of the supply chain. The project's contraceptive supply chain achievements are shown in the infographic given below (see figure 2).

Figure 2. USAID | DELIVER PROJECT Achievements



Project interventions in Pakistan are designed to improve the availability of health supplies at the last mile and improve visibility of information throughout the supply chain. To achieve this goal, the project has introduced sustainable health systems related technologies and innovations.

2.1 WEB-BASED LOGISTICS MANAGEMENT INFORMATION SYSTEM

The project successfully delivered and implemented web-based LMIS support and information for all tiers of the health system and supply chain through three different LMIS systems: contraceptives (cLMIS) (available at www.c.lmis.gov.pk), TB/MDR (tLMIS) (available at www.t.lmis.gov.pk), and vaccines (vLMIS) (available at www.v.lmis.gov.pk). Each system is linked to procurement planning, forecasting, and financing of procurement activities. The incorporation of bar coding in an automated inventory control system provides a tracking and tracing ability for the

commodities. The dashboard of the web-based LMIS enables the policy makers, managers and researchers to review reports online and make corrective decisions instantaneously.

The project has provided equipment and trained health staff on cLMIS in all 143 districts, and to approximately 2,500 district and sub-district level Government of Pakistan (GOP) staff on LMIS and procurement. This has allowed the health workforce to report and review real-time LMIS data, reduce pilferage, and design geographic information system tools that can be used to convey stock status and other key data to stakeholders.

Training of Federal EPI staff

2.2 WAREHOUSING AND PROCUREMENT SUPPORT

The Central Warehouse, Karachi has been extended and equipped to handle an increased volume of contraceptive commodities with support from the USAID | DELIVER PROJECT. The key personnel responsible for logistics have been trained in the redesigned LMIS. These improvements have led to the recognition of the Central Warehouse as a state-of-the-art supply and distribution facility with a sustained International Standards Organization (ISO) certification 9001:2008 (QMS) since 2013. The Federal EPI Program is also being reformed and enhanced with additional application of international WHO standards for cold chain management.

The project also provides technical support to the GOP in the areas of contraceptive quantification and forecasting, procurement planning, and warehouse management. On the basis of these investments, and as a meaningful example on sustainability, the governments of Punjab, Sindh, and Khyber Pakhtunkhwa have committed domestic financing worth $83 million for fiscal year 2015–2019.

Inside the Central Warehouse in Karachi

2.3 SUPPORTING GLOBAL FUND GRANT IMPLEMENTATION:

JSI was contracted by the Principal Recipient, Greenstar Social Marketing Pakistan, to support the National Tuberculosis Control Program (NTP) to develop an automated logistics management information system and warehouse management system for tuberculosis medicines and supplies, called the Drug Management Information System (www.t.lmis.gov.pk) (see figure 3).

Figure 3. Tuberculosis Drugs Management Information System

2.4 EPI COORDINATION & PLANNING RESOURCE CENTER

The USAID | DELIVER PROJECT assisted the MoNHSR&C in the establishment of an EPI Coordination & Planning Resource Center within the Ministry's premises. The Center was equipped with a state-of-the-art computer server, not only for ensuring data visibility of EPI vaccines and cold chain equipment through vLMIS, but also country wide data of the TB and Family Planning Public and Private Health Supply Chains. The server is capable of meeting data storage needs of Pakistan Health Information System for the next two decades.

During these supply chain reforms at the EPI, the project also provided technical assistance and coordination support to the MoNHSR&C, Federal EPI and the Ministry of Information Technology (MoIT) for hosting and maintenance of data servers at the National Telecommunication Corporation (NTC) for the purpose of sustainable data security of the Pakistan LMIS.

3 INITIATING REFORMS AT THE EPI

3.1 INCIDENT

On 24 February, 2015, a startling loss of 1.3 million doses of pentavalent vaccine was noticed at the Federal EPI, due to a complex set of governance issues relating to management of vaccines (see figure 4). As part of the Government's own commitment and strategic leadership, the MoNHSR&C immediately took remedial actions and requested the USAID | DELIVER PROJECT's technical support to create a coordinated response to improve transparency and support logistics at the Federal EPI (letter from the Ministry is attached as Annex A). Specifically, this required the following:

- Situation analysis, including identifying the root causes leading to mismanagement
- Improving storage conditions and physical verification, as per Vaccine Supply Stock Management (VSSM) data and Vaccine Vial Monitor (VVM) status
- Reforming the Federal EPI cold storage and improved visibility through web-based vaccine LMIS (vLMIS)
- Refurbishment and inventory management of dry stores
- A plan of action for moving forward in the immediate term, coordinated with the Ministry and stakeholders.

Figure 4. Article about vaccine wastage in the newspaper Dawn.

DAWN

EST PAKISTAN TODAY'S PAPER OPINION WORLD SPORT BUSINESS MAGAZINE ENTERTAIN

Pakistan wastes $3.7 million worth of donated vaccine

ISLAMABAD: Pakistan has wasted $3.7 million worth of vaccines donated to protect children from deadly diseases because officials failed to store them properly, a senior health official told Reuters on Monday.

The scandal is the latest problem to be exposed in Pakistan's poorly run public health services.

The project was already engaged actively with the Federal EPI, assisting the Government to improve vaccine management through the implementation of the vLMIS. In addition, the project has also

supported the EPI in improving its dry stores. The incident became a blessing in disguise and provided the space to the Project to access EPIs vaccine and dry stores and initiate reforms on hardware and human resource capacities at the facility.

3.2 SITUATION ANALYSIS:

A detailed situation analysis was undertaken for strategizing the action plan. During this time, senior officials of the MoNHSR&C, including the Minister and the Secretary, paid a number of visits to personally review the situation and provide guidance to make corrections.

The following areas were identified for analysis:

1. Standard operating procedures (SOPs)/ guidelines for receipt, warehousing, cold chain maintenance, distribution, and transportation
2. Human resource capacity.
3. Responsibilities and accountability.
4. Cold-chain maintenance.
5. Stock status of cold and dry stores and their management.
6. Data visibility, management and its quality.
7. Warehouse infrastructure and equipment maintenance.

The Federal EPI being visited by the Minister, MONHSR&C

3.3 FINDINGS & ACTIONS

Chronic mismanagement of vaccines had created an adverse scenario at the Federal EPI. In addition to the wastage of 1.3 million doses of pentavalent, the Planning Commission-1 document (PC-1) for EPI had not been approved for more than three years and severe negligence of storage practices and operational management, and non-adherence to SOPs was evident from the overall performance of the warehouse. Additionally, there was a high-dependence on support from international partners. The situation analysis identified several specific shortcomings.

3.3.1 Unreliability of data & Improper Storage

Inaccuracies between VSSM data and physical status of vaccines were observed. The situation assessment showed that physical verification was done very infrequently and VVM had never been checked.

In response to the request by the Ministry, and under the leadership of Secretary Muhammad Ayub Sheikh and his office, the project immediately mobilized its resources and provided a team of logistics and information systems experts to work with Mr. Saqlain Gilani, the EPI National Program Manager and Director, Central Warehouse Karachi. These experts were divided into specialized teams, each focusing on addressing a specific area, and worked closely with the government staff.

The project, guided by the Ministry and other stakeholders, completed a physical count of vaccines and organized stock using proper inventory management procedures, batch numbers and expiry dates. This was a significant undertaking involving the physical movement of vaccines. The data

obtained was compared with data in the VSSM, and findings were presented to the Ministry and partners (EPI, WHO, UNICEF, and the Japan International Cooperating Agency). (Annex B).

Subsequently, the Ministry established a joint physical verification committee comprising EPI, UNICEF, WHO, and the USAID | DELIVER PROJECT (Annex C). Both the vaccine and dry stores were highly mismanaged resulting in inappropriate storage practices, unknown stock quantities, and expired drugs.

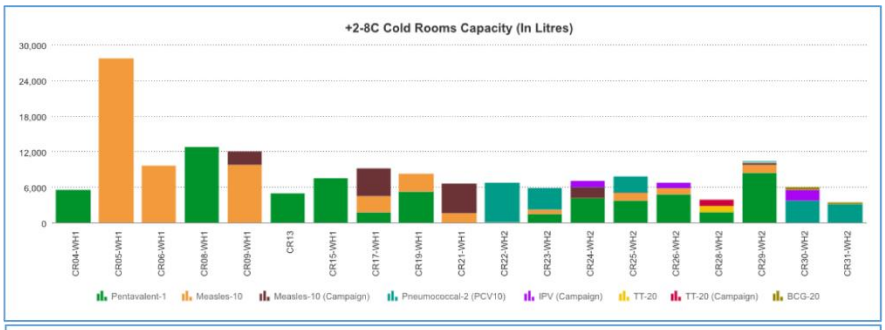
3.3.1.1 Inappropriate Storage Practices

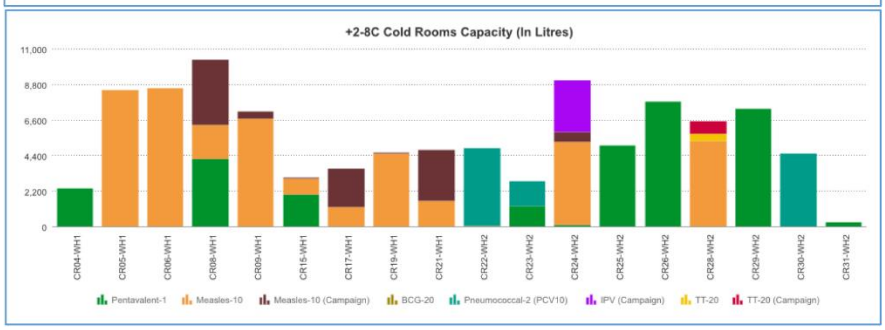
Storage facilities had massive over stacking and improper placement of products. Most batch numbers could not be read and vaccines of one batch were scattered in different cold rooms (as shown in graph below). Storing antigens and batch numbers in different cold rooms is not in accordance with good practices (the 'Before' graph below shows the amounts of antigens in different cold rooms and variability of various antigens stored). During the reorganization, each cold room was designated for specific antigens (reflected in the 'After' graph). With this depressing ground situation, it was impossible to issue commodities as per batch numbers and apply the First Expiry, First Out (FEFO) principle.

Action: Reorganization of cold rooms was done as per WHO standards. Proper batch placement allowed easy monitoring of shelf life and VVM and proper shipment planning for priority vaccines. (See Annex D for the Office order form for actions for improving stores).

Before **After**

Before





After: vLMIS 18 May, 2015 (rearranged antigens for better storage and distribution practices)

3.3.1.2 Missing Batches

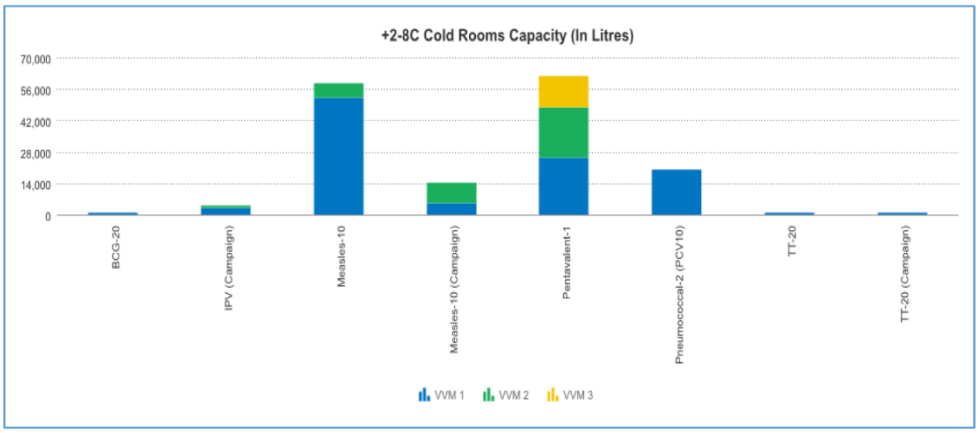
A few batches indicated in VSSM could not be found in the cold rooms, and some batches physically present were missing from the VSSM sheets.

Action: The Ministry made a decision to use vLMIS for vaccine and dry store management, since the system could be accessed by all the decision makers across the country. A Vaccine Management Review Committee was also established to meet periodically and support decision making on matters pertaining to vaccines (minutes of the Vaccine Management Committee meeting held on 19 March, 2015 are attached as Annex E, and minutes of the Vaccine Management Review Committee meeting held on 20 March, 2015 is attached as Annex F). Newly discovered quantities were added in vLMIS and batches not found physically were removed.

3.3.1.3 VVM Verification

VVM status of stored vaccines was not being monitored as per SOPs.

Action: The Ministry asked WHO/ UNICEF to physically verify the VVM status of vaccines stored in cold rooms. The project assisted the Federal EPI, WHO, and UNICEF to verify all VVM status. The status summary determined as of 1 April, 2015 is shown in the chart below.



Based on VVM Stage II and expiry date information, a priority distribution list was developed for the issuance of vaccines to the provinces (the provincial priority distribution plan is attached as Annex G).

3.3.1.4 Expired & Cold Chain Damaged Stock

Expired and cold chain damaged stock found in the cold stores was counted, separated, and written off from the inventory.

Antigen	Doses
bOPV	39,640
Meningococcal	1,622
mOPV-1	5,660
Pentavalent-1	1,388,156
tOPV	155,860

3.3.1.5 Dry Store Rehabilitation

The dry store was very disorganized, making a physical count impossible.

Action: Responding to urgent needs, dry store items were reorganized by commodity so a physical count could be completed. It is noteworthy that some of the manpower utilized in improvements of

Before

After

the dry stores were assigned from the GOP's own staff and brought in from the Central Warehouse, Karachi. The Central Warehouse staff were trained by the USAID | DELIVER PROJECT.

Before

After

Dry store data counting and arrangement

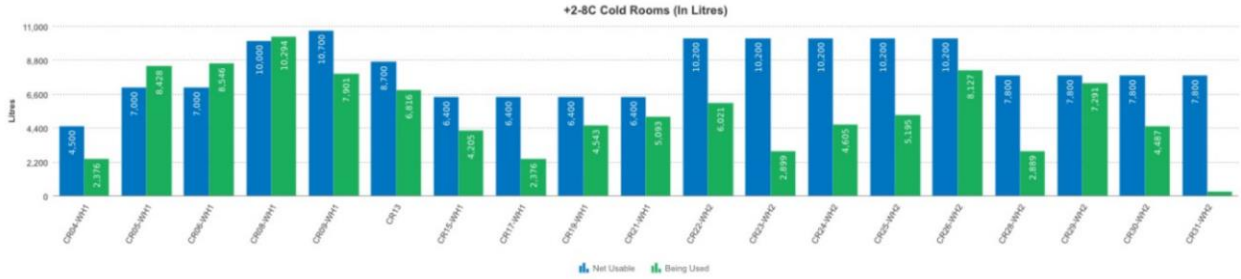
S. No	Product	Balance
1.	0.5 ml cc Auto Disposable Syringe	24,546,800
2.	2 ml Syringe Auto Disposable	48,700
3.	5 ml Syringe Auto Disposable	2,260,000
4.	Vitamin A	52,056,000
5.	Safety Box	918,000
6.	Carrier Boxes	356
7.	Cooler Boxes	77

3.3.1.6 Automation of Generators

Generators were operated manually. They were converted to have an auto-switch function.

3.3.1.7 Cold Room Space Calculations

The project determined available storage space in cold rooms and analyzed it with the current stock position in order to advise the Government on future consignments.



3.3.1.8 Additional Cold Room/Freezing Space Needed

Capacity needed to store RI/Campaign Antigens			
Cold rooms	**Available Capacity**	**Required additional Capacity***	**Comments*** **
2-8C*	132,519	180,572	5-6 cold rooms needed with the gross capacity of 54.6 m3/unit
-20C	29,029	106,972	8-9 freezers needed with the gross capacity of 54.6 m3/unit

* To store six MoS as per AMC provided by EPI/PEI Programs for RI and SIAs schedule targets
** -20C additional capacity is for both RI and SIAs
***Dual function CR/FR are available; this can be potentially a good alternate/solution

3.3.2 GS1 Bar Code Pilot Implementation

Parallel to the reorganization work, the project completed the Global Standard 1 (GS1) bar code scanning of Measles-10 doses and TT-20 doses vaccines containing GS1-claimed bar codes. This enabled the Government to trace and track vaccines through the supply chain pipeline. A GS1 bar code room was constructed to maintain the temperature of vaccines during bar coding and batching.

LMIS has already been enabled to accommodate the GS1 barcoding standards for vaccine and contraceptive products. After consultation, it was decided to pilot the GS1 at the Federal EPI warehouse, Islamabad, the Punjab provincial EPI warehouse, Lahore, and in Multan and Rawalpindi district stores. Related training was provided to relevant government staff.

GS1 implementation was initiated at the Federal EPI warehouse. All measles vaccine stock-taking exercises were successfully conducted through a barcode scanner, and a TT vaccine shipment was also received through a barcode scanner. The vaccine was then shipped to the Punjab EPI store through a barcode scanner. The MC9200 barcode scanner was used during the entire issue and receives process. During the stock-taking/receiving and issuance, secondary packing of the vaccines was scanned.

During implementation, the following points were noted:

1. Some of the barcodes on the secondary packing were not scanned due to an inappropriate printing of GS1 Datamatrix. Those boxes were separated and new barcode stickers were pasted on them. The stickers were printed using vLMIS. There are other key findings with implications at global and vaccine industry levels and were presented at the GS 1 Mexico Conference.
2. There was a significant overstocking in cold rooms at the Federal EPI warehouse. Therefore, it was difficult to scan all the boxes. In the circumstances, the scanning time was 8–10 boxes/ minute. However, in places where the vaccines were better stacked, the scanning time was reduced to more than 20 boxes/minute.
3. During stock-taking of measles vaccine, it was realized that it was possible to scan one box several times. To remove this anomaly, serialization was used during the process for error-free counting of the vaccine products.

As integration of vaccines for GS1 barcoding has to be incremental; the Federal and provincial EPI programs, in collaboration with the Project, have started the piloting of measles & TT vaccines arriving in the country with pre-printed barcodes from the manufacturer, on GS1 standards. Piloting

is based on the assumption that the vaccine will come with pre-printed barcodes from the manufacturer. However, for current supplies in the pipeline, the EPI program and the Project have coordinated with the vendor to supply GS1-compliant measles and TT vaccine. This has been further communicated and deliberated with the GAVI and UNICEF supply chain divisions. Based on GAVI Mission's field visits to Islamabad and Lahore Cold Room warehouses along with JSI/DELIVER team; Mr. Kaleb Brown presented the core findings at the VPPAG in June 2015.

3.3.3 Warehouse Operations & Security

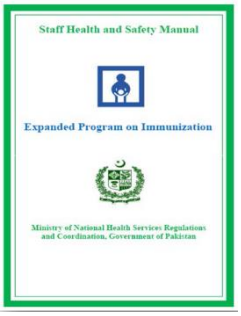
1. With the support of the project, a state-of-the-art vLMIS operations room is being built. It will work as a nerve-center for dissemination within the Government and development partners, enabling them to make informed decisions on vaccine management. The facility will also have a support desk with toll-free numbers to respond to issues and queries from provinces and regions.
2. The project, along with the Federal EPI, is preparing a transition plan that will ensure the capacity of staff recruited by the Ministry.
3. Two fork lifts were provided for both the dry and vaccine stores.
4. Twenty-six closed-circuit television (CCTV) cameras were installed in the cold and dry stores for surveillance and monitoring purposes. They are web-based and can be monitored all day and night from any location.

Bar coding being implemented.

Fork-lifts

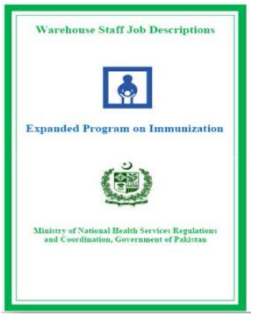
Different visuals from the CCTV cameras

3.3.4 Manuals & SOPS



No written SOPs were found pertaining to storage, receipts, issuance, maintenance of cold chain, and other key storage activities.

Action: Standard operating procedures and job titles and descriptions were revised to ensure improved inventory management through the full operationalization of vLMIS. The following were revised:



- Staff Health and Safety Manual
- Warehouse Staff Job Descriptions
- Warehouse Monitoring Checklist
- Standard Operating Procedures.

3.3.5 Human Resource

The GOP will need additional human resources to handle the improved vaccine management in both the immediate and long terms. Ongoing external technical assistance that decreases in intensity over time will be needed. A core group of well trained staff from the GOP should, therefore, be dedicated to continuous management of the vaccines and ancillary products. The signs of several of the problems reported stems from the fact that vaccine supply chain management was more dependent on external aid agencies and less staff involved from the GOP.

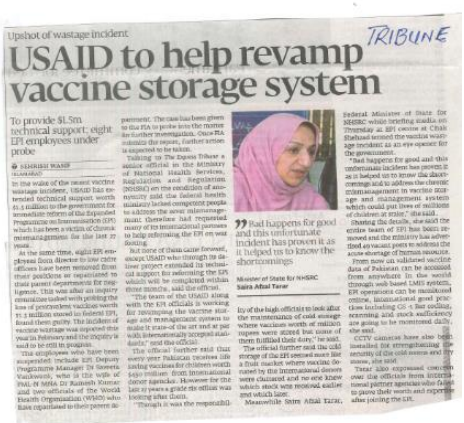
Title	Auth	Filled	Pay Scale
Store Officer	1	-	BS-17
Refrigeration Engineer	1	-	BS-17
Assistant Store Officer	1	-	BS-16
Assistant Refrigeration Engineer	2	-	BS-16
Sub Engineer Electrical	2	-	BS-14
Store Keeper	4	-	BS-11
Refrigeration Mechanic	4	1	BS- 07
Helper	3	1	BS- 02
Laborers	10	4	BS-02

The most serious human resources problem identified was that most of the approved positions (PC-1) related to warehousing had been vacant since 2009. Out of 28 staff authorized for warehousing, only six positions were filled. These positions were employed on an ad hoc basis and the employees lacked the requisite qualifications.

Action: To respond to the human resource gaps, the Ministry decided to fill all vacancies on an urgent basis. Relevant officials were instructed to complete the recruitment process within six weeks (newspaper advertisement is attached as Annex H). Additionally, it is also critical that continuous capacity building and on-the-job training programs be established for the staff working in vaccine supply chain management.

3.4 MEDIA BRIEFING

On 23 April, 2015, the Minister of State, MONHSR&C, Mrs. Saira Afzal Tarar, held a media briefing on reforms undertaken at Federal EPI. She applauded the efforts and contributions made by USAID through the USAID | DELIVER PROJECT to reform Federal EPI vaccine management and announced that the reforms will be completed in three months.



TRIBUNE

Upshot of wastage incident

USAID to help revamp vaccine storage system

To provide $1.5m technical support; eight EPI employees under probe

CITYNEWS

EPI reforms begin as FIA launches probe into vaccine wastage scandal

DAWN

DAWN ISLAMABAD, FRIDAY APRIL 24, 2015

Vaccine storage and management system put in place

Ministry claims credit for system revamped under USAID project after 1.3m doses of vaccine were found spoiled at EPI store

4 CHALLENGES

- The current system at the Federal EPI has been functional for the last 27 years. Hence, a certain way of working has become the norm. Changing this mindset to work differently after applying strict accountability measures will be the foremost challenge towards making the Federal EPI both effective and efficient. Streamlining will be a step-by-step process that will take time.
- The human resource challenge will also be important to ensure a long-term, permanent change. Not only is additional staff required immediately, but building their capacities and clarifying SOPs and terms of reference will require a serious and targeted action both by the Government and other stakeholders. The human resource challenge is compounded by a shortage of cold chain and other technical experts in the country. It is necessary to bring in external technical assistance to fill up the gaps in the needed areas. However, all external technical assistance must also focus on training the national staff in order to build in-country capacity over a period of time. A case in point worth mentioning here is using in-country resources when the MONHSR&C requested the project's assistance. Staff at the Central Warehouse, Karachi, trained by the project, were brought in to provide assistance and they successfully organized the EPI warehouse using the inventory management procedures.
- Robust accountability mechanisms need to be institutionalized including periodic reviews to check whether the system is functional and effective. Monthly attendance of the dissemination of the review at the Operation Center is critical for key GOP officials, including the Secretary, Director General, National EPI Manager, and stakeholder representatives.
- The Government is committed to scaling up vLMIS to all the 143 districts across the country. However, immediate resources are only available for Sindh through USAID support. Full-scale data visibility up to the Union Council level will be essential for enhancing the quality and usefulness of vLMIS.

5 WAY FORWARD

- The EPI reforms need to be sustained by the MoNHSR&C, it is important that federal transformation is replicated at the provincial and divisional levels to standardize EPI operations;
- Pakistan vLMIS is the backbone to such potential reforms and countries in the world (Ethiopia, Tanzania, Nicaragua and Myanmar) are looking at Pakistan to introduce countrywide automated accountability. Unfortunately, vLMIS is only operating in 83 districts of Pakistan under USAID and Pakistan co-financing, however, resources are needed to scale up vLMIS in the remaining 78 districts/towns to standardize EPI operations throughout the country;
- Vaccine Logistics Management Committee should be re-notified with provincial and regional governments' participation. The committee should meet regularly to review vLMIS and other data sets to make critical decisions about procurement planning and supply decisions. As the vLMIS Federal level inventory data is relevant for all the provinces, it is important that regular monthly meetings are held with the provincial managers to apprise them of the inventory levels, VVM stages, and shelf-life of various vaccines. Providing information and current use of supplies will lead to better supply chain and inventory management, and hence curtail possibilities of pilferage and wastage. The meetings should also establish smooth distribution/transportation system of ZERO tolerance towards cold chain breakage on the wheels and/or at the EPI and community administration level.
- vLMIS helped Pakistan federal EPI transition to accountable storage and distribution practices; the current inventories of cold rooms have been verified by EPI team, UNICEF and WHO. However, periodic audits of the entire vaccine management system should be formalized and made mandatory. It is estimated that an additional cold space of 450 - 500 Cubic Litters can help Pakistan overcome its chronic and non-compliant vaccine storage practices. Installation of temperature monitoring equipment (data loggers) in the cold rooms should be made a priority.
- To create space in dry stores of the ancillary commodities stored; transportation of surplus commodities down to the district level should be commenced immediately. More than procurement execution; behavior of procurement planning is much desired. Policy and procedures for auction of the vaccine packaging material should be developed immediately.
- Routine Immunization and Polio antigens are stored, managed and distributed by federal EPI, it is important to develop synergies between the EPI and PEI programs for smooth operations.
- The need for additional cold rooms may be assessed by the Federal EPI and request for financial support floated to international donors.

The above interventions will go a long way in ensuring effective management of vaccines at the Federal EPI. These will also need to be replicated at the provincial and regional levels. For sustainability and continued safety of the vaccines, and ultimately to saves lives of mothers and children at risk in Pakistan, there is an urgent need to exercise zero tolerance on activities that risk the quality of vaccines.

Annex A: MoNHSR&C Letter Requesting Assistance

Government of Pakistan
Ministry of National Health Services, Regulations & Coordination
LG & RD Complex G-5/2, Islamabad

Islamabad, the 25th February, 2015

OFFICE ORDER

No. F. 224/EPI/NHSRC/2015 The Competent Authority i.e. Secretary M/o NHS,R&C has been pleased to assign the task to assess the entire vaccine management system of Federal EPI Store, Islamabad and to make and implement recommendations for reform and streamlining the system, to Syed Ilyas Haider, Director Central Warehouse & Supplies Karachi w.e.f 25-02-2014 till the finalization/Implementation of recommendations.

2. Dr. Muhammad Tariq Country Director, USAID Deliver Project is requested to provide Human Resource/Logistic Support to Syed Ilyas Haider, Director, Central Warehouse & Supplies, Karachi to accomplish the task.

(Muhammad Tahir Akbar)
Section Officer (Admn-III)
051-9245961

Distribution:-

1) PS to Minister, M/o NHS,R&C, Islamabad.
2) SPS to Secretary, M/o NHS,R&C, Islamabad
3) P.A. to Joint Secretary (Admn), M/o NHS,R&C, Islamabad
4) National Program Manager, Expanded Program on vaccination & Immunization.
5) Director General, PPW, M/o NHS,R&C, Islamabad.
6) Dr. Muhammad Tariq, Country Director, USAID Deliver Project
7) Officer concerned

Annex B: Findings from Preliminary Review and Data

Reforming Vaccine Supply Chain Management at the Federal EPI

19 March 2015

Muhammad Tariq, Country Director

World Health Organization | USAID | DELIVER PROJECT | unicef

USAID | DELIVER PROJECT

Blessing in disguise though after a sad incidence

- On 24th Feb 2015, Federal EPI was informed that 1.3 million doses of Penta vaccine stored in cold room 13 had gone wasted
- Ministry of NHSR&C requested USAID-DELIVER for technical support to reform the Federal EPI Cold Room & Dry Stores Information Management

2

USAID | DELIVER PROJECT

Situation analysis of Vaccine Cold Rooms and Dry Stores

Reflections of Past, however tomorrow looks promising

- Chronic deficiency of human resource
- Over stocking and improper inventory management making it impossible to segregate vaccines according to batch number
- FEFO was impossible to implement
- VVM of vaccines stored for long had not been checked

Cont .....

3

USAID | DELIVER PROJECT

Reflections of Past, however tomorrow looks promising

- Procedures of receipts, storage and issuance/transportation not even OK, leave aside international protocols and SOPs
- Cold chain temperature monitoring equipment insufficient, remote alarms not available
- Chronic and extreme mismanagement of dry stores with poor inventory controls. Stocks were just stuffed in the warehouse and physical counting of items was not possible

4

USAID | DELIVER PROJECT

Ministry at War for the Children of Pakistan

- Secretary MoNHSR&C decides not to attend GAVI Board meeting but to oversee Federal EPI reforming the Vaccine Management Systems which should be founded on the Right Information and Data
- DELIVER team consisting of 17 supply chain IS experts assisted by 10 labor force worked day and night for ten days and completed the physical counting/stacking of vaccine as per their batch numbers with the NPM and EPI staff

cont. .....

5

USAID | DELIVER PROJECT

Ministry at War for the Children of Pakistan

- Likewise a team under supervision of Director CW&S with technical assistance of the Project worked in the dry stores to organize dumped items in a manner that physical count becomes possible
- All the Measles and TT vaccine stocks were GS 1 barcoded
- WHO and UNICEF determined the VVM status of verified vaccines in the cold rooms

6

USAID | DELIVER PROJECT

Ministry at War for the Children of Pakistan

- Two vaccine distribution cabins being developed with computers & internet facilities, one in each warehouse
- Procured equipment to facilitate work of Federal EPI in the cold & dry stores
  - 20 pairs of protective clothing provided to cold room teams
  - 02 fork lifters provided for dry and vaccine stores stacking
  - 26 CCTV cameras being installed in the cold & dry stores for records and accountable administration through web

7

USAID | DELIVER PROJECT

Findings of Physical Verification and Putting the Information in Order to Start with Dependable Data

8

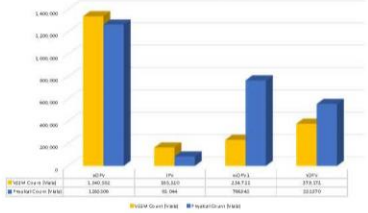
USAID | DELIVER PROJECT

We thank MoNHSR&C to make this happen

9

USAID | DELIVER PROJECT

We had not been managing well !!

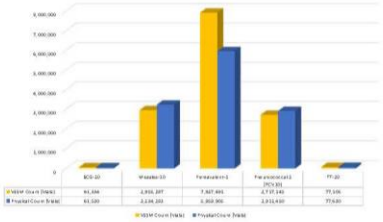


Estimated 5000 (approx. 50-55L space) expired doses of meningococcal vaccine

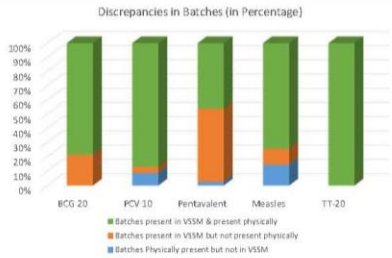
11

USAID | DELIVER PROJECT

We had not been managing well !!

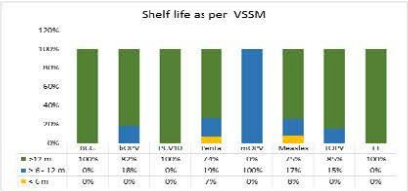


USAID | DELIVER PROJECT

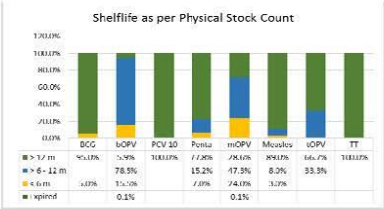


USAID | DELIVER PROJECT

Discrepancies of shelf life data



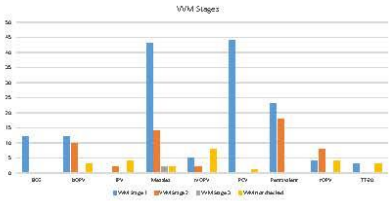
USAID | DELIVER PROJECT



- Vaccine with shelf life <6m need to be distributed
- Expired vaccines need to be disposed off

USAID | DELIVER PROJECT

VVM of 22 cold rooms established



USAID | DELIVER PROJECT

Federal EPI Dry Stores

Syringes	Required Qty *	Physical Qty **
0.5 ml AD Syringes	35,939,609	44,222,500
2ml Reconstituted Syringes	70,040	133,800
5ml Reconstituted Syringes	2,381,303	1,466,400
0.05 AD Syringes	1,400,800	13,000

USAID | DELIVER PROJECT

vLMIS vs VSSM

vLMIS	VSSM
Open source application of GOP	Licensing is needed
Web-Based online system (http://v.lmis.gov.pk)	Desktop application (1-2 person property)
Seamless integrated system	Feature not available
Deals in online integrated Inventory Management at federal, Provincial, District and Tehsils levels	Deals in offline Inventory Management at federal level only
Deals in online integrated Cold Chain Management at federal, Provincial, District and Tehsils levels	Deals in offline Cold Chain at Federal level only
No maintenance & backup required at all sites	On-site maintenance and backup is needed
GSL bar code enabled	Feature not available
Handling and placement feature available for dry store	Feature not available
Compatible to integrate with other information systems	Feature not available
Compatible with handheld devices	Feature not available

USAID | DELIVER PROJECT

Recommendations

1. Physical verification established on the ground real inventories to start afresh
2. vLMIS data should be modified based on real stocks and be accessible ONLINE to both EPI and partners as and when needed (DELIVER)
3. Policy decision on the fate of vaccines with VVM status 2 and expired vaccine (meningococcal) still stored in cold rooms to create adequate space
4. Surplus dry stores' items be distributed to provinces/regions and procurement of needed 0.05ml AD syringes and 5ml recon syringes

USAID | DELIVER PROJECT

Recommendations

4. Need to expedite procurement and installation of temperature monitoring equipment in the cold rooms a priority
5. Right people for the right places should be recruited and their compliance to vaccine handling and storage (SOPs & FEFO)
6. Ministry to clearly define reporting lines for the purpose of accountability

USAID | DELIVER PROJECT

Human Resource for Warehouses - Status

Title	Auth	Filled	Pay Scale
Store Officer	1	-	BS-17
Refrigeration Engineer	1	-	BS-17
Assistant Store Officer	1	-	BS-16
Assistant Refrigeration Engineer	2	-	BS-16
Sub Engineer Electrical	2	-	BS-14
Store Keeper	4	-	BS-11
Refrigeration Mechanic	4	1	BS- 07
Helper	3	1	BS- 02
Laborers	10	4	BS-02

20

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24

USAID
FROM THE AMERICAN PEOPLE
DELIVER PROJECT

USAID
FROM THE AMERICAN PEOPLE
DELIVER PROJECT
Vaccine on the Wheels
26

Annex C: Constitution of Committees for Systems Review and Physical Re-verification and Re-Arrangement of Vaccines

TO BE PUBLISHED IN HE NEXT ISSUE OF WEEKLY GAZETTE OF PAKISTAN

Government of Pakistan
Ministry of National Health Services, Regulation & Coordination
L.G & RD Complex, Sector G-5/2, Islamabad

Islamabad, the 18th March, 2015

NOTIFICATION

No.F.1-1/2015-D-G(H) Secretary, Ministry of National Health Services Regulations and Coordination (NHS,&C) is pleased to constitute committee on Vaccine Management System Review Committee comprising of the following:-

1. Dr. Assad Hafeez, Director General (Health), M/o NHS.&C.
2. National Programme Manager, EPI
3. Dr. Keith Feldon, WHO
4. Dr. Aiden O'Leary, UNICEF
5. Dr. Randolph Augustin, USAID
6. Mr. Yohei Ishiguro, JICA
7. Dr. Muhammad Tariq, USAID, Deliver Project,
8. Dr. Obaid Ullah,DDG(Reg), DRAP

Terms of Reference:-

i. Review and discuss findings of Federal Expended Program of Immunization (EPI) Cold Rooms and Dry Stores Physical Inventories.

ii. Based on the findings, agree on the immediate and medium term activities to improve EPI supply chain performance including:

   a. Needs of immediate vaccine stock management and distribution to provinces/regions
   b. Standardization of federal level vaccine information system and harmonization with provincial/regional EPI programs for stock management.
   c. Review preparedness for the upcoming shipments and advise on procurement plan.
   d. Coordination with the provincial EPI programs on their stocks management of new shipments and logistics.

3. Monitor CCEM, vaccine supply chain improvement and performance on regular basis.

4. Supervise preparation of SOPs and finalize SOPs for vaccine Store Management in EPI.

(Dr.Farhan Zahid)
Section Officer
Phone: 9245961,

Printing Corporation of Pakistan,
Karachi.

Copy to:-

1. PS to Minister of State, M/o NHSR&C.
2. SPS to Secretary, M/o NHSR&C
3. PS to Director General(Health)
4. APS to JS (Admn)
5. Chairman and All Members of the committee.

Section Officer

No. F. 3-5/2014-EPI/Admin
Government of Pakistan
Ministry of National Health Services, Regulations and Coordination
Expanded Programme on Immunization
Islamabad
*****

Islamabad dated the 31st March, 2015

OFFICE ORDER

Subject: - **CONSTITUTION OF COMMITTEE FOR PHYSICAL RE-VERIFICATION & RE-ARRANGMENTS OF THE VACCINES.**

In pursuance of the decisions taken in the meeting of Vaccine Management System Review Committee held on 31-03-2015 under the chairmanship of Director General, M/o NHSR&C, the following committee is constituted:-

i.	Dr. Agha Muhammad Ashfaq Khan, Director Monitoring, EPI	Chairman.
ii.	Mr. Zahoor Ahmed, Deputy Director (Admin) EPI	Member
iii.	Mr. Naeem Asghar,Assistant Director (Operations), EPI	Member
iv.	Syed Touqeer Hussain Shah,Store Keeper, EPI	Member
v.	Dr. Tariq Masood,Vaccine / Polio Specialist,	Member
vi.	Miss. Anahitta Shirzad,Procurement Specialist, UNICEF	Member
vii.	Representative of WHO	Member

2. The TORs of the Committee includes physical re-verification of the vaccine, quantities re- arrangements and reorganization of all vaccine stock as per SOPs for vaccine storage. The committee will submit its report within 1 week positively including official holidays.

(Dr. Syed Saqlain Ahmad Gilani)
National Programme Manager

Distribution:-

1. SPS to Secretary, Ministry of NHSR&C, Islamabad.
2. PS to Director General, Ministry of NHSR&C, Islamabad.
3. APS to Joint Secretary, Ministry of NHSR&C, Islamabad.
4. Deputy National Programme Manager, (Operations), EPI, Islamabad.
5. Store Officer, EPI, Islamabad.
6. Assistant Director (Operation) EPI, Islamabad.
7. Account Officer, EPI.
8. Officer / Officials Concerned.
9. Office Order File.
10. PF of Officer / Officials Concerned.

Annex D: Office Order for Actions for Implementation of Recommendations for Reforms

F.No. 3-5/2014/Admin/EPI
Ministry of National Health Services & Regulations Coordination
Expanded Programme on Immunization
Islamabad
******

March 4, 2015

OFFICE ORDER

In the pursuance of the Ministry's office order No.224/EPI/NHSRC/2015 dated 25th February, 2015,

2. As per discussion with Syed Ilyas Haider, Director, Central Warehouse & Supplies, Karachi in the NPM, EPI office, following actions are required to implement the recommendations for reform and streamlining the system of Federal EPI central store.

S. No.	Required Action & Responsibility
i.	The store would be sealed at the end of the evening hours every day and re-open in the next day.
ii.	The keys of the central warehouse would be with the responsible person (Dr. Najamullah Baig, Dy. Director Operation)
iii.	It is directed to change all keys & locks of the vaccine stores. *(Mr. Zahoor Ahmed. DDA, Mr. Munawar Hussain,DDP&L)*
iv.	No vaccine delivery would be made after the working hours until unless prior approval of the NPM, EPI for urgent cases if any.
v.	All employee will display their official card compulsory *(Mr. Munawar Hussain,DDP&L)*
vi.	The dumped stock in dry store need to be updated and write off the stock accordingly as per Government rules. *(Dr. Najamullah Baig, Dy. Director Operation)*
vii.	Delivery will be made only on prescribe voucher & gate pass would be issued dully signed by the authorized official/officer. *(Dr. Najamullah Baig, Dy. Director Operation)*
viii.	Brig (R) Zafar Jamil is assigned to look after the security & administration for central store including HR and all the official/officers are directed to provide all relevant information desired by the said officer.

3. This issues with the approval of competent authority.

Dr. Syed Saqlain Ahmad Gilani
National Program Manager

Copy to:
1. PS to Minister, MoNHSR&C
2. SPS to Secretary, MoNHSR&C
3. PS to DG, MoNHSR&C
4. Concerned EPI Staff

Annex E: Minutes of the Meeting for Vaccine Management Committee

Government of Pakistan
Ministry of National Health Services, Regulations & Coordination
LG & RD Complex, Sector G-5/2, Islamabad

No.F.2-17/2013-Dir(P) Islamabad, the 30th March, 2014.

Subject: **MINUTES OF THE MEETING OF VACCINE MANAGEMENT COMMITTEE.**

I am directed to enclose copy of minutes of the meeting of Vaccine Management Committee held on 19th March 2015 under the chairmanship of Minister of State M/o NHSR&C, Islamabad.

(Taj Wali Khan)
Deputy Director (P-II)
Ph: 9245584

Distribution list attached.

Copy to :

1. SPS to Secretary, M/o NHS,R&C.
2. PS to Director General, M/o NHS,R&C.

List of Vaccine Management Committee

1. Dr. Assad Hafeez, Director General (Health), M/o NHSR&C, Islamabad.
2. National Programme Manger, EPI, NIH, Islamabad.
3. Dr. Keith Feldon, WHO, NIH, Islamabad
4. Dr. Aiden O'Leary, UNICEF
5. Dr. Randolph Augustin, USAID
6. Mr. Yohei Ishiguro, JICA
7. Dr. Muhammad Tariq, USAID Deliver Project
8. Dr. Obaid Ullah, DDG (Reg) DRAP
9. Dr. Hasan Orooj, Director (H) CDA

MINISTRY OF NATIONAL HEALTH SERVICES, REGULATION & COORDINATION

MINUTES OF MEETING VACCINE MANGEMENT COMMITTEE
On 19 March, 2015

The meeting was held in the committee room at M/o NHSRC at 9:30 am, which was chaired by Honorable Minister and was attended by Secretary, Director General Health and the members of the notified committee. (List attached)

The **objectives** of the meetings were to;

1- Take stock of the situation arising out from loss of pentavalent vaccine at the EPI store.
2- what are the best practices for vaccine management & role of partners
3- Way forward to safe the existing stock present in the store and suggest concrete measure to prevent such incidents in future

Proceedings;

1- After introduction Honorable Minister welcomed the participants and stated this meeting of the management committee was called in backdrop of the incident which resulted in loss of vaccine which was a great loss in terms of finances as well as it exposed the poor state of affairs at the EPI vaccine stores in context of its management by EPI program. She said that she wanted to discuss the matter by keeping in view the above stated objective. Moreover she also wanted to know the roles and responsibility of each partners to support government in area of vaccine management.

2- Director General Health shared the TORs of the committee with the participants (attached) He remarked that Ministry desired that the committee to sit and work on fast track keeping in view the TORs and steer the whole process to advice about appropriate steps to be taken.

3- Secretary while giving his opening remarks stated that his incident was an eye opener and we need to learn from it and should ensure vaccine security in terms of quality and quantity. The vaccine which was available in the store we need to ascertain its status of VVM and would like that the work which is being done by deliver should be completed well in time and that the forum should give recommendation and guidelines after digging deep in the matter so that future stock is secured.

4- Dr Tariq Deliver project in his presentation analyzed the how the stores were mismanaged which resulted in loss of 14 million doses of pentavalent and gave recommendation (Annex 2). He said this was an opportunity to reform EPI supply chain system. Moreover their teams were inventorying all the stock available in the 13 store and checking the VVM. Due to deficient He said that there has been severe lack of qualified HR to manage the stores and non availability of appropriate measure for maintaining the cold chain. There was over stocking and improper inventory management making it impossible to segregate vaccines according to batch number while FEFO was impossible to implement while VVM of vaccines stored for long had not been checked. His team had completed the physical counting/stacking of vaccine as per their batch numbers. There were discrepancies found about quantity of vaccines present in store with that of those numbers written in registers. While eight out of nine trucks with cold chain

facility used for transportation of vaccine were not functional, while measles is lying there since 2 years!

5- His key **recommendations** were ; (1) Physical verification established on the ground & real inventories to start afresh ; (2)vLMIS data should be modified based on real stocks and be accessible ONLINE to both EPI and partners as and when needed; (3) Policy decision on the fate of vaccines with VVM status 2 and expired vaccine (meningococcal) still stored in cold rooms to create adequate space ;(4) Surplus dry stores' items be distributed to provinces/regions and procurement of needed 0.05ml AD syringes and 5 ml syringes .

6- Honorable **Minister** inquired that who was responsible for this entire incident; store keepers; UN agencies didn't point this out to her; management of this largest program! or her whole team. In future work together along with partners; Accountability mechanism; **EPI mangers** stated that priority was to get the final data after physical verification exercise; stores were now kept in proper condition; VVM has to be verified; campaign syringes were counted; space available as 40 million doses dispateched to provinces; **Secretary** commented that VVM needed to be checked in 20 cold stores before we dispatch the vaccine to the provinces and inquired whether PC 1 should be revisited in such situation. Moreover he informed that three experienced person from NIH are being placed today at disposal of EPI until vacant positions are filled. Moreover he had mailed it to Seth Berkley about the situation and JS would be coming up with his recommendation after inquiry.

7- Dr. Qumurul, MO WHO, on query of Minster, commented that as per SOPs, physical verification needs to be carried out every year; VVM needs to be checked regularly on monthly basis; FEFO be followed; technicians were handling stores which was above their capacity; all store rooms overstocked; many vaccines are in stage two & urgent measures need to be taken to save the vaccine stock; EVM assessment showed gaps, situation has deteriorated since then.

8- UNICEF Dr Tania Goldiner commented that we should focus on present & right decision to be taken; teams at EPI to complete the task at the earliest; big consignment which had to arrive today has been delayed ; vaccine to be shifted to provinces for space; HR to be in place;

9- Secretary remarked that we should see the capacity of stress at federal & provincial level and deliver them what is due; we should be sure before next procurement;

10- Keith WHO remarked that overstocking be sent to provinces; Low utilization coverage of RI is resulting in overstocking; no proper feedback from field and district level; lot of IPV in good state be saved & taken out as it is in the same cold room; shipment plan be delayed;

11- Minister remarked that provincial store rooms also needed to be examined; the committee should come up with storage space, cold chain, time lines , recommendations and action plan. Committee to meet tomorrow

Decisions;

a) System to completely switch over to vLMIS, one system should be in place
b) Physical inventory should be entered in vLMIS, committee to validate its data.
c) Overstuffing of vaccine in cold rooms to be removed to provinces & maintain cold chain as per SOP
d) HR gap to be placed on urgent basis, stores be equipped, generators for electricity failure, data should be accurately entered.
e) Stage 2 vaccine be sent to other stores as priority no 1

Annex F: Minutes of the Vaccine Management Review Committee Meeting on 20 March 2015

Minutes of Vaccine Management Review Committee's Meeting

Minutes of Meeting

March 20, 2015

After the incident of wastage of approximately 0.4 million doses of pentavalent vaccine from GAVI in kind support, stored in cold room number 13 situated in NIH. The secretary of Ministry of NHSR&C convened a meeting and requested Directorate of central ware house and supply Karachi along with USAID Deliver to support in streamlining the physical inventory of the cold rooms and dry stores in the federal EPI building. Also NPM requested the WHO to establish the VVM of the inventoried cold rooms. In the wake of this loss, measures have been taken for the smooth storage and delivery of vaccines accordingly. Eventually a committee on Vaccine Management System Review was constituted under the chairmanship of DG of MNHSRC. The committee was comprising of the following members and with their TORs:

1. Dr. Assad Hafeez Director General (Health) Chairman
2. National Programme Manager, EPI Member
3. Dr Keith Feldon, WHO Member
4. Dr Aiden O'Leary, UNICEF Member
5. Dr Randolph Augustin, USAID Member
6. Mr. Yohei Ishiguro, JICA Member
7. Dr Muhammad Tariq, USAID, Sliver Project Member
8. Dr ObaidUllah, DDG (Reg), DRAP Member

Terms of Reference:

i. Review and discuss findings of federal expanded programme on immunization (EPI) cold rooms and Dry Stores Physical Inventories.
ii. Based on the findings, agree on the immediate and medium term activities to improve EPI supply chain performance including:
    a. Needs of immediate vaccine stock management and distribution to provinces/regions
    b. Standardization of federal level vaccines information system and harmonization with provincial/regional EPI programs or stock management.
    c. Review preparedness for the upcoming shipments and advise on procurement plan.
    d. Coordination with the provincial EPI programs on their stock managements of new shipments and logistics.
iii. Monitor CCEM, vaccine supply chain improvement and performance on regular basis.
iv. Supervise preparation of SOPs and finalize SOPs of vaccine store management in EPI.

Venue of the Meeting:

The first meeting of the above said committee was held on 20 March 2015 at 12 pm in the committee room of federal EPI program under the chairmanship of DG of MNHSRC.

Meeting Agenda:

The agenda of the meeting are as under:

1. Assessment of cold room capacity in collaboration with WHO/UNICEF and SoPs for stacking of vaccines with the follow up decision for preparedness to receive the coming consignment of vaccines.
2. Assessment and brief review of VLMIS/VSSM for improvement of the stacking of vaccines as per SOPs
3. Provision of fridge tag and temperature monitor in cold rooms
4. Status of VVM of all vaccines and to review SOPs for VVM.
5. Status of the existence vaccines stock and its disposal /delivery according to the VVM stage to quarter concern.
6. To constitute of sub-committee for different component of effective vaccine management and to define TORs of the sub-committee.
7. To identify technical human resources to fill up the gap.

Few of the members regretted for this meeting because of unavoidable commitments (list of the participants attached at Flag A).

Proceedings:

The meeting started with the agenda number 1 and TO Cold chain was invited to provide information regarding the individual capacity of cold rooms/freezers and the total capacity of the two stores having 19 cold rooms (+2^{0}C to +8^{0}C) and five freezer rooms (-15^{0}C to -25^{0}C). The National programme manager presented the current situation of the stores and present vaccine which was over staked, the committee recommended to reassess the capacity of the stores and position of the stock of the vaccines present in the cold rooms with the support of WHO, UNICEF and USAID Deliver so that the program would be able to find the gaps to give way forward, if required, keeping in mind the capacity for new vaccines like IPV and ROTA in future. Also the USAID Deliver team would support in assessment of vaccine storage capacity and the quantity of stored vaccines in line with the currently physically verified inventory in the vLMIS by the USAID Deliver team. The chairman of the committee recommended that along with other requirements there is also need to check the VVM stage of all the vaccines.

Regarding the agenda item number 2, the country director USAID Deliver briefed the status of VLMIS at the central store level. In this context, Mr Ghulam Taqi (TO Cold Chain) and Zeeshan Nawaz (Statistical investigator), Mr Atif(office assistant) who both are working on VSSM from last many years were called by the committee to discuss the pros and cons of switching over the VSSM to VLMIS. The view of the National Programme

Manager was also recorded and after deliberate discussions the USAID Deliver was advised by the committee to initially upload the inventories of all the incoming and outgoing vaccines on Vaccine Logistic Management Information system (VLMIS) and the comprehensive picture for switching over the two software would be presented in the next meeting of the committee to be decided. Meanwhile, the program will follow the data from VLMIS and cross check with VSSM.

The National Programme Manager presented the status of provision of the fridge tags and temperature monitors OF the cold rooms for district and central level respectively. The committee recommended to making a plan for installation of the temperature monitors to present in the next coming committee meeting.

Moreover, the committee recommended presenting and discussing the SoPs/standard guidelines for VVM check of the vaccines at central store level. Also a plan may be presented in the committee meeting to streamline the vaccine receipts and delivery according to the VVM stage and expiry date following the FEFO. The National programme Manager EPI drew the attention of the committee to about the > 1 million doses of the measles vaccines which are going to be expired on 7-2015 with VVM stage 1 and the committee recommended to make a comprehensive brief with the action plan for such vaccines of nearest expiry and disposal of the approximately 0.4 million of the pentavalent vaccine in the cold room number 13 which have gone to VVM stage number 3 and 4 as per SoPs available. The committee gave instruction also to constitute a sub-committee at the program level under the supervision of National Program Manager with members from WHO, UNICEF and USAID Deliver to make a road map of effective vaccine management in the light of EVM IPV 2015.

The meeting ended with the vote of thanks and the next meeting of the committee is scheduled on **26th March 2015.**

List of Participants

S.No.	Name & Organization	Participant
1	National Programme Manager, EPI	Confirm
2	Dr Keith Feldon, WHO	Regretted
3	Dr Aiden O'Leary, UNICEF	Regretted
4	Dr Muhammad Isa, USAID	Confirm
5	Mr. Yohei Ishiguro, JICA	Regretted
6	Dr Muhammad Tariq, USAID, Sliver Project	Confirm
7	Dr ObaidUllah, DDG (Reg), DRAP	Confirm

Annex G: Provincial Priority Distribution Plan as per vLMIS (http://v.lmis.gov.pk) Vaccine Supply Chain Management Antigen-wise Prioritization of Vials, to be issued from the Federal EPI to the provinces/ areas to use in the field (as of 27 March 2015)

Unusable Not to be sent to Provinces and need to be destroyed as per National guidelines

Priority 1 (VVM Grade II ***OR*** Date of Expiry by July 2015

Priority 2 (VVM-I, Date of Expiry b/w Aug 15 to Jun 2016)

Priority 3 (VVM-I, Date of Expiry Jul 2016 onwards)

Product	Batch	Expiry	VVM	Quantity (Vials)	Quantity (Doses)	Comments
Priority – 02						
BCG-20	52-2	Aug-15	1	100	2,000	
BCG-20	53-1	Aug-15	1	3,500	70,000	
BCG-20	54-1	Aug-15	1	3,500	70,000	
BCG-20	54-2	Aug-15	1	3,500	70,000	
			Total	**10,600**	**212,000**	

Priority - 03						
BCG-20	49-1	Jan-17	1	3,500	70,000	
BCG-20	46-2	Jul-17	1	3,300	66,000	
BCG-20	47	Aug-17	1	2,960	59,200	
BCG-20	48-2	Aug-17	1	4,510	90,200	
BCG-20	49-2	Aug-17	1	1,300	26,000	
BCG-20	51	Sep-17	1	820	16,400	
BCG-20	52-1	Sep-17	1	3,920	78,400	
			Total	**20,310**	**406,200**	

Product	Batch	Expiry	VVM	Quantity (Vials)	Quantity (Doses)	Comments
Priority – 01						
IPV(Campaign)	K7323-1	Sep-16	2	19,200	192,000	
IPV(Campaign)	K7393-1	Sep-16	2	2,490	24,900	
IPV(Campaign)	L7133-1	Feb-17	2	25,440	254,400	
IPV(Campaign)	K7387-1	Oct-16	2	17,210	172,100	
IPV(Campaign)	L7007-1	Dec-16	2	840	8,400	
IPV(Campaign)	L7013-1	Dec-16	2	21,673	216,730	
IPV(Campaign)	L7024-1	Dec-16	2	2,881	28,810	
IPV(Campaign)	L7058-1	Dec-16	2	1,010	10,100	
			Total	**90,744**	**907,440**	
Priority -02						
IPV(Campaign)	L7135-1	Mar-17	1	33,200	332,000	

Product	Batch	Expiry	VVM	Quantity (Vials)	Quantity (Doses)	Comments
Unusable						
Measles 10	2504913	Jun 15	3	2,568	25,680	
Measles 10	2505213	Jul 15	3	2,940	29,400	
Priority -01						
Measles - 10	2504613	Jun-15	2	800	8,000	
Measles - 10	2504713	Jun-15	2	30,080	300,800	
Measles - 10	2505013	Jun-15	2	490	4,900	
Measles - 10	2505113	Jul-15	2	32,745	327,450	
Measles - 10 (Campaign)	004N3115	Jan-16	2	14,400	144,000	
Measles - 10 (Campaign)	004N3193A	Jan-16	2	1,629	16,290	
Measles - 10 (Campaign)	004N3193B	Jan-16	2	51	510	
Measles - 10 (Campaign)	004N3194	Jan-16	2	1,180	11,800	
Measles - 10	004F4011	Apr-16	2	50,700	507,000	
Measles - 10	004F4028	Apr-16	2	50,700	507,000	
Measles - 10	004F4064	Jun-16	2	103,500	1,035,000	

Measles - 10	004F4088	Jul-16	2	9,600	96,000	
Measles - 10 (Campaign)	004M4008B	Aug-16	2	90,600	906,000	
Measles - 10 (Campaign)	004M4011B	Aug-16	2	24,000	240,000	
			Total	**410,475**	**4,104,750**	
Priority -02						
Measles 10	004N3195A	Nov-15	1	37,200	372,000	
Measles - 10 (Campaign)	004N3116	Jan-16	1	14,400	144,000	
Measles - 10 (Campaign)	004N3131A	Jan-16	1	650	6,500	
Measles - 10 (Campaign)	004N3140A	Jan-16	1	50	500	
Measles - 10	004F4065	Jun-16	1	27,600	276,000	
Measles - 10	004F4076	Jun-16	1	20,400	204,000	
Measles - 10	004F4077	Jun-16	1	29,100	291,000	
Measles - 10 (Campaign)	004F4069	Jun-16	1	54,600	546,000	
Measles - 10 (Campaign)	004F4070	Jun-16	1	89,100	891,000	
Measles - 10 (Campaign)	004F4071	Jun-16	1	91,800	918,000	
Measles - 10 (Campaign)	004F4072	Jun-16	1	91,200	912,000	
Measles - 10 (Campaign)	004F4073	Jun-16	1	85,500	855,000	
Measles - 10 (Campaign)	004F4074	Jun-16	1	90,300	903,000	
			Total	**631,900**	**6,319,000**	
Priority -03						
Measles - 10	04N3195B	Jan-00	1	1,200	12,000	
Measles - 10	004F4087	Jul-16	1	68,700	687,000	
Measles - 10	004F4098	Jul-16	1	3,000	30,000	
Measles - 10	004F4105	Aug-16	1	30,300	303,000	
Measles - 10	004F4106	Aug-16	1	78,000	780,000	
Measles - 10	004F4107	Aug-16	1	103,200	1,032,000	
Measles - 10	004F4108	Aug-16	1	29,700	297,000	
Measles - 10	004F4109	Aug-16	1	70,800	708,000	
Measles - 10	004F4109	Aug-16	1	14,700	147,000	
Measles - 10	004F4110	Aug-16	1	125,100	1,251,000	
Measles - 10	004F4111	Aug-16	1	91,500	915,000	
Measles - 10	004F4113	Aug-16	1	29,700	297,000	

Measles - 10	004F4115	Aug-16	1	2,100	21,000	
Measles - 10	004F4116	Aug-16	1	2,700	27,000	
Measles - 10 (Campaign)	004M4010	Aug-16	1	49,500	495,000	
Measles - 10 (Campaign)	004M4012	Aug-16	1	91,200	912,000	
Measles - 10	004F4128	Sep-16	1	37,200	372,000	
Measles - 10	004F4140	Sep-16	1	57,900	579,000	
Measles - 10	004F4141	Sep-16	1	90,600	906,000	
Measles - 10	004F4142	Sep-16	1	89,700	897,000	
Measles - 10	004F4143	Sep-16	1	31,200	312,000	
Measles - 10	004M4120A	Sep-16	1	661,500	6,615,000	
Measles - 10	004M4120B	Sep-16	1	86,400	864,000	
Measles - 10	004M4121A	Oct-16	1	18,000	180,000	
Measles - 10	004M4129	Oct-16	1	84,900	849,000	
Measles - 10	004M4130	Oct-16	1	91,200	912,000	
Measles - 10	004M4130B	Oct-16	1	32,100	321,000	
Measles - 10	004M4131A	Oct-16	1	92,100	921,000	
Measles - 10	004M4131B	Oct-16	1	54,000	540,000	
			Total	**2,218,200**	**22,182,000**	

Product	Batch	Expiry	VVM	Quantity (Vials)	Quantity (Doses)	Comments
Priority -02						
PCV	ASPNA441AA	Jun-16	1	5,400	10,800	
PCV	ASPNA442AA	Jun-16	1	36,300	72,600	
			Total	**41,700**	**83,400**	
Priority -03						
PCV	ASPNA495AA	Oct-16	1	1,900	3,800	
PCV	ASPNA483BA	Oct-16	1	19,200	38,400	
PCV	ASPNA503AA	Oct-16	1	14,000	28,000	
PCV	ASPNA500AA	Nov-16	1	19,400	38,800	
PCV	ASPNA511AA	Nov-16	1	123,100	246,200	
PCV	ASPNA513AA	Nov-16	1	7,000	14,000	
PCV	ASPNA513BA	Nov-16	1	255,200	510,400	
PCV	ASPNA515AA	Nov-16	1	2,100	4,200	
PCV	ASPNA519AA	Nov-16	1	2,000	4,000	
PCV	ASPNA522BA	Nov-16	1	1,100	2,200	
PCV	ASPNA531AA	Dec-16	1	3,000	6,000	
PCV	ASPNA537AA	Jan-17	1	217,200	434,400	
PCV	ASPNA542AA	Feb-17	1	40,800	81,600	

PCV	ASPNA542CA	Feb-17	1	28,900	57,800	
PCV	ASPNA545AA	Feb-17	1	38,400	76,800	
PCV	ASPNA546BA	Feb-17	1	17,600	35,200	
PCV	ASPNA548AA	Feb-17	1	35,400	70,800	
PCV	ASPNA553AA	Feb-17	1	300	600	
PCV	ASPNA555AA	Feb-17	1	190,750	381,500	
PCV	ASPNA556BA	Mar-17	1	18,200	36,400	
PCV	ASPNA572AA	Mar-17	1	70,000	140,000	
PCV	ASPNA577AA	Mar-17	1	136,000	272,000	
PCV	ASPNA579AA	Mar-17	1	62,100	124,200	
PCV	ASPNA579BA	Mar-17	1	69,800	139,600	
PCV	ASPNA579CA	Mar-17	1	4,800	9,600	
PCV	ASPNA581AA	Mar-17	1	600	1,200	
PCV	ASPNA582BA	Mar-17	1	66,700	133,400	
PCV	ASPNA585BA	Mar-17	1	28,800	57,600	
PCV	ASPNA588AA	Mar-17	1	18,500	37,000	
PCV	ASPNA583AA	Apr-17	1	60,200	120,400	
PCV	ASPNA595AA	Apr-17	1	144,000	288,000	
PCV	ASPNA595CA	Apr-17	1	86,400	172,800	
PCV	ASPNA596BA	Apr-17	1	24,000	48,000	
PCV	ASPNA601AB	Apr-17	1	127,400	254,800	
PCV	ASPNA602AA	Apr-17	1	167,900	335,800	
PCV	ASPNA605AA	Apr-17	1	159,100	318,200	
PCV	ASPNA632AA	Apr-17	1	4,800	9,600	
PCV	ASPNA604AA	May-17	1	115,300	230,600	
PCV	ASPNA604BA	May-17	1	41,600	83,200	
PCV	ASPNA633AA	May-17	1	53,100	106,200	
PCV	ASPNA638BA	May-17	1	14,400	28,800	
PCV	ASPNA639AA	May-17	1	73,400	146,800	
			Total	**2,564,450**	**5,128,900**	

Product	**Batch**	**Expiry**	**VVM**	**Quantity (Vials)**	**Quantity (Doses)**	**Comments**
Unusable						
Pentavalent	1453177	Jan 15	3	50	50	
Pentavalent	1453161	Nov 15	3	50	50	
Prentavalent	1453161	Nov 15	3	106,297	106,297	
Prentavalent	1453163	Nov 15	3	10,500	10,500	
Pentavalent	1453162	Dec 15	3	155,400	155,400	
Pentavalent	1453172	Dec 15	3	4,200	4,200	
Prentavalent	1453162	Dec 15	3	303,028	303,028	

Prentavalent	1453172	Dec 15	3	8,402	8,402	
Pentavalent	1453163	Dec 15	3	8,400	8,400	
Pentavalent	1453162	Dec 15	3	228,900	228,900	
Pentavalent	1453172	Dec 15	3	6,300	6,300	
Pentavalent	1453177	Jan 16	3	243,650	243,650	
Prentavalent	1453178	Jan 16	3	10,555	10,555	
Pentavalent	1453177	Jan 16	3	180,600	180,600	
Pentavalent	1453178	Jan 16	3	31,500	31,500	
Prentavalent	1453177	Jan 16	3	37,974	37,974	
			Total	**1,335,806**	**1,335,806**	
Priority-01						
Pentavalent	1453199	Apr-16	2	2,000	2,000	
Pentavalent	1453230	Jun-16	2	5	5	
Pentavalent	1453239	Jul-16	2	300	300	
Pentavalent	1453240	Jul-16	2	6,145	6,145	
Pentavalent	1453262	Sep-16	2	28,800	28,800	
Pentavalent	1453265	Sep-16	2	500	500	
Pentavalent	1453270	Nov-16	2	200	200	
Pentavalent	1453271	Nov-16	2	1,550	1,550	
Pentavalent	1453276	Dec-16	2	5,000	5,000	
Pentavalent	1453278	Dec-16	2	52,650	52,650	
Pentavalent	1453279	Dec-16	2	6,500	6,500	
Pentavalent	1453280	Dec-16	2	450	450	
Pentavalent	1453281	Dec-16	2	100	100	
Pentavalent	1453284	Jan-17	2	195,300	195,300	
Pentavalent	1453293	Feb-17	2	2,100	2,100	
Pentavalent	1453279	Dec-16	2	5,900	5,900	
Pentavalent	1453171	Dec-16	2	634	634	
			Total	**308,134**	**308,134**	
Priority-02						
Pentavalent	1453257	Jun-16	1	6,300	6,300	
Pentavalent	1453258	Jun-16	1	12,600	12,600	
			Total	**18,900**	**18,900**	
Priority-03						
Pentavalent	1453239	Jul-16	1	16,800	16,800	
Pentavalent	1454087	Jul-16	1	163,200	163,200	
Pentavalent	1453270	Nov-16	1	319,200	319,200	In CR-24, it is at early stage-2
Pentavalent	1453271	Nov-16	1	4,800	4,800	In CR-24&25, it is at stage-2
Pentavalent	1453277	Dec-16	1	57,600	57,600	

Pentavalent	1453278	Dec-16	1	145,200	145,200	In CR-24, it is at stage-2
Pentavalent	1453279	Dec-16	1	7,650	7,650	
Pentavalent	1453281	Dec-16	1	650	650	
Pentavalent	1453283	Jan-17	1	321,300	321,300	
Pentavalent	1453284	Jan-17	1	170,700	170,700	
Pentavalent	1453286	Jan-17	1	688,800	688,800	
Pentavalent	1453285	Jan-17	1	388,800	388,800	
Pentavalent	1453311.02	Jan-17	1	474,600	474,600	
Pentavalent	1453315.01	Jan-17	1	450,300	450,300	
Pentavalent	1453293	Feb-17	1	138,600	138,600	
Pentavalent	1453294	Feb-17	1	734,050	734,050	
Pentavalent	1453295	Feb-17	1	494,400	494,400	
Pentavalent	1453237	Jul-16	1	2,100	2,100	
Pentavalent	1453314.01	Jul-17	1	600,900	600,900	
			Total	**5,179,650**	**5,179,650**	

Product	**Batch**	**Expiry**	**VVM**	**Quantity (Vials)**	**Quantity (Doses)**	**Comments**
Priority-03						
TT	019B4006A	Mar-17	1	31,550	631,000	
TT	019B4006B	Mar-17	1	8,580	171,600	
TT-20 (Campaign)	019B4006B	Mar-17	1	8,583	171,660	
TT-20 (Campaign)	019B4008A	Jun-17	1	20,111	402,220	
TT-20 (Campaign)	019B4008C	Jun-17	1	8,806	176,120	
			Total	**77,630**	**1,552,600**	

Product	**Batch**	**Expiry**	**VVM**	**Quantity (Vials)**	**Quantity (Doses)**	**Comments**
Unusable						
bOPV	J5421 1	Feb 14	2	200	4,000	
Priority-01						
bOPV	K5478-1	Oct-15	2	250	5,000	
bOPV	K5535-1	Nov-15	2	10	200	
bOPV(IHR)	AOP4A384BA	Jan-16	2	3,100	62,000	
bOPV(IHR)	AOP4A386AA	Jan-16	2	99,300	1,986,000	
bOPV	L5142-1	Mar-16	2	25,410	508,200	
bOPV	L5274-1	May-16	2	28,170	563,400	
bOPV	L5278-1	May-16	2	30,257	605,140	

bOPV	L5272-1	May-16	2	90	1,800	
bOPV	L5271-1	May-16	2	40	800	
bOPV	L-5283-1	Jun-16	2	50	1,000	
bOPV	AOP4A406AA	Aug-16	2	233,900	4,678,000	
bOPV	K5292-1	May-15		10	200	
			Total	**420,587**	**8,411,740**	
Priority-02						
bOPV	K5479-1	Oct-15	1	190	3,800	
bOPV	AOPV4A363AA	Oct-15		1	20	
bOPV	AOP4A362AA	Nov-15	1	100	2,000	
bOPV	AOP4A391AA	Jan-16	1	500	10,000	
bOPV	L5139-1	Feb-16		40	800	
bOPV	L5093-1	Feb-16	1	140	2,800	
bOPV	L5140-1	Feb-16	1	470	9,400	
bOPV	AOP4A393AA	Mar-16	1	19,300	386,000	
bOPV	AOP4A397AA	Apr-16	1	138,200	2,764,000	
bOPV	AOP4A398AA	Apr-16	1	247,900	4,958,000	
bOPV	AOP4A401AA	May-16	1	43,600	872,000	
bOPV	AOP4A403AA	May-16	1	115,202	2,304,040	
bOPV	L5262-1	May-16	1	83,800	1,676,000	
			Total	**649,252**	**12,985,040**	
Priority-03						
bOPV	AOP4A399AA	Jul-16	1	29,300	586,000	
bOPV	AOP4A410BA	Aug-16	1	78,100	1,562,000	
bOPV	AOP4A322AB	Nov-16	1	84,000	1,680,000	
			Total	**191,400**	**3,828,000**	
Product	**Batch**	**Expiry**	**VVM**	**Quantity (Vials)**	**Quantity (Doses)**	**Comments**
Priority-01						
mOPV	132703	Nov-15	2	1,990	39,800	
mOPV1	132507	Nov-15	2	2,970	59,400	
mOPV1	132718	Jan-16	2	6,500	130,000	
mOPV1	132712	Jan-16	2	35,200	704,000	
mOPV1	142722	Jan-16	2	51,575	1,031,500	
mOPV1	142724	Jan-16	2	21,050	421,000	
mOPV1	142723	Jan-16	2	2,700	54,000	
mOPV1	142725	Jan-16	2	2,950	59,000	
			Total	**124,935**	**2,498,700**	
Priority-02						

mOPV1	132704A	Nov-15	1	300	6,000	
mOPV1	132706	Dec-15	1	800	16,000	
mOPV1	132707	Dec-15		200	4,000	
mOPV1	132720	Jan-16	1	18,900	378,000	
mOPV1	132717	Jan-16	1	16,045	320,900	
mOPV1	132719	Jan-16	1	50	1,000	
mOPV1	132721	Jan-16	1	33,100	662,000	
mOPV1	142726	Jan-16	1	37,600	752,000	
mOPV1	142727	Jan-16	1	3,200	64,000	
mOPV1	142728	Jan-16	1	3,000	60,000	
mOPV1	132715	Dec-16	1	1,450	1,450	
			Total	**114,645**	**2,265,350**	
Product	**Batch**	**Expiry**	**VVM**	**Quantity (Vials)**	**Quantity (Doses)**	**Comments**
Unusable						
tOPV	K5098 1	Feb 15		20	400	
tOPV	K5143 1	Mar 15		80	1,600	
tOPV	L5221	Apr 16	4	4,400	88,000	
tOPV	L5209 1	Apr 16	4	2,600	52,000	
Priority-01						
tOPV(Campaign)	AOPVB996BA	Apr-16	2	27,154	543,080	
tOPV	L5223-1	Apr-16	2	50	1,000	
tOPV	K5267-1	May-15	2	10	200	
tOPV	K5234-1	May-15	2	30	600	
tOPV(Campaign)	K5251-1	May-15	2	140	2,800	
tOPV	K5265-1	May-15	2	20	400	
tOPV	2022713	Jul-15	2	1,200	24,000	
tOPV	K5388-1	Aug-15	2	40	800	
tOPV	2025713	Nov-15	2	1,300	26,000	
tOPV	2025813	Nov-15	2	49	980	
tOPV	2026013	Nov-15	2	37,750	755,000	
tOPV	2026113	Nov-15	2	47,400	948,000	
tOPV	L5232-1	May-16	2	185,000	3,700,000	
tOPV	AOPVC030AA	Dec-16	2	3,200	64,000	
tOPV	K5252-1	May-15		10	200	
tOPV	K-5365-1	Jun-15	1	120	2,400	
tOPV	K5351-1	Jun-15		40	800	
			Total	**303,513**	**6,070,260**	
Priority-02						

tOPV	2025913	Nov-15	1	10,550	211,000	
tOPV	L-5199-2	Apr-16	1	100	2,000	
tOPV	2026213	Jan-16		1,400	28,000	
tOPV	2026213	Jan-16		2,400	48,000	
tOPV	2026213	Jan-16		4,850	97,000	
tOPV	2026213	Jan-16		10,800	216,000	
tOPV	AOPVB984AA	Jan-16		100	2,000	
tOPV	2026213	Jan-16		1,400	28,000	
			Total	**31,600**	**632,000**	
Priority-03						
tOPV(Campaign)	AOPVC008AA	Aug-16	1	26,997	539,940	
tOPV(Campaign)	AOPVC019AA	Aug-16	1	200	4,000	
tOPV(Campaign)	AOPVC020BA	Aug-16	1	32,600	652,000	
tOPV(Campaign)	AOPVC014AA	Aug-16	1	19,799	395,980	
			Total	**79,596**	**1,591,920**	

Annex H: Advertisement for Staff Positions

No.F.2-4/2014/ EPI/Admin

Expanded Programme on Immunization

Ministry of National Health Services, Regulation and Coordination

Government of Pakistan, Islamabad.

SITUATION VACANT

Applications are invited for the posts mentioned below on contract basis up to 31-12-2015 in Federal Expanded Programme on Immunization under the Ministry of National Health Services, Regulation & Coordination, Islamabad. The required qualification and experience are as under for each advertised post:

S.No	Name of Post	No. of Posts	Place of Posting	Age Limit Years	Minimum Qualification & Experience
1.	Dy Director (MIS) (BS-18)	01	Uniit	35-30	• MBBS or M.Sc. Statistics or Economics • MPH or equivalent recognized qualification by PMDC • 3 Years experience in BS-17 in public health programme • Computer skills.
2.	Dy Director Operation (BS-18)	01	Uniit	35-30	• MBBS and Postgraduate qualification in Public Health such as MPH recognized by PMDC • 3 Years experience in BS-17 in public health programme or similar/equivalent position in reputable organizations • Computer skills.
3.	Associate Director Operation (BS-17)	01	Uniit-1	15-30	• MBBS or equivalent degree recognized by PMDC • 2 Years experience in BS-17 in public health programme or similar/equivalent position in reputable organizations • Computer skills.
4.	Software Engineer (BS-17)	01	Uniit	15-30	• M.S/MS/MCS/MSc in Computer Science/ Software Engineering/IT/Computer Science • Experience with IT in public sector. • Computer skills.
5.	Associate Director (Surveillance) (BS-17)	01	Uniit	15-30	• MBBS or equivalent qualification recognized by PMDC • 7 years experience Surveillance operations specialist preferred • Computer skills.
6.	Associate Director (Training) (BS-17)	01	Uniit	15-30	• MBBS or equivalent qualification recognized by PMDC • Extra qualification and experience in capacity building of national/ international programs. • Computer skills.
7.	Procurement & Logistics Officer (BS-17)	01	Uniit	15-30	• Graduate. • Five years experience in BS-17 relating to procurement and stores matters in health program/ institution or equivalent experience in reputable private sector/ NGO organization. • Computer skills.
8.	Refrigerator Engineer (BS-17)	01	Uniit	15-30	• B.E (Electrical/Mechanical) degree/equivalent qualification recognized by HEC. • Three years experience in relevant field. • Computer skills.
9.	Assistant Refrigerator Engineer (BS-11)	02	Punjab-1 KPK-1	15-30	• Matric. • 03 years Diploma from Polytechnic institute with 5 years experience in installation and repairing of Refrigerator. • Computer skills.
10.	Sub Engineer (Civil) (BS-14)	01	Uniit	15-30	• Matric with Science. • 03 years Diploma from Polytechnic Institute with 05 years Experience in Civil Work. • Computer skills.
11.	Data Assistant (BS-14)	01	Uniit	15-30	• BCS with 05 years experience in relevant field. • Computer skills.
12.	IT Assistant (BS-14)	01	Uniit	15-30	• BCS with 05 years experience in relevant field. • Computer skills.
13.	Statistical Assistant (BS-14)	01	Uniit	15-30	• B.Sc/B.A/Statistics/Economics/ • Experience in public health Program • Computer skills.
14.	Assembly Supervisor (BS-14)	01	Uniit	15-30	• Matric/ Science with Diploma in Electrical/ Electronics Operation
15.	Supervisor Horticulture (BS-14)	01	Uniit	15-30	• Matric/ Science with Diploma in Horticulture
16.	Communication Assistant (BS-14)	02	Punjab-1 KPK-1	15-30	• [illegible] • Computer skills.
17.	Cashier (BS-14)	01	Uniit	15-30	• B.Com/ M.Com with Diploma in Accounts/ Banking and Book Keeping • Computer skills.
18.	Computer Operator (BS-17)	04	Punjab-2 KPK-1 Sindh-1	15-30	• Graduate with Diploma in Computer Science with five years experience in computer operator. • Computer skills.
19.	Accountant (BS-12)	02	Punjab-1 KPK-1	15-30	• I. Com or DCC with 5 years experience in dealing with accounts. • Computer skills.
20.	Receptionist (BS-07)	01	Uniit	15-30	• Matric • 3 Years Experience and Fluent in English • Computer skills.
21.	Vehicle Mechanic (BS-11)	01	Uniit	15-30	• Matric with Diploma in relevant technology and 03 years experience.
22.	Store Keeper (BS-11)	02	Punjab-1 KPK-1	15-30	• Graduate and 3 years experience in dealing in public health programme. • Computer skills.
23.	Telephone Operator (BS-07)	01	Uniit	15-30	• Matric • Skilled in telephone operator work and • 03 years practical experience in telephone operator • Computer skills.
24.	Driver (BS-04)	06		18-30	• Matric with 5 years experience • Must have valid public service • LTV driving license
25.	Daftri (BS-02)	02	Local	18-30	• Matric • Persons of 5 years experience would be preferred.
26.	Naib Qasid (BS-02)	02	Local	18-30	• Matric • Experience in Office work will be preferable
27.	Cleaner (BS-02)	01	Local	18-30	• Fit for Cleaning work.
28.	Sweeper (BS-02)	04	Local	18-30	• Sweeping/ cleaning
29.	Labourer (BS-02)	05	Local	18-30	• Heavy & Fit for manual work.
30.	Helper (BS-02)	03	Local	18-30	• Heavy & Fit for manual work.

1. The advertisement is valid only for existing vacancies (S/No 1 to 30 only) and does not appear elsewhere in the Ministry of Programme Manager EPI, Prime Minister National Health Complex, Park Road, Chak Shahzad, Islamabad within 15 days of the publication of this advertisement.
2. Incomplete application or received after deadline will not be considered. Only eligible candidates will be called for test/interview and no TA/DA will be paid to the candidates.
3. Candidates working in Government Department should apply through proper channel. Their services will not be released in any case until been released.
4. Relaxation in age or qualification is allowed as per rules and decision of the Government of Pakistan.
5. The posts are on project basis and are only going to be extended to 30-06-2015 and the project may be extended after approval of Near PC-1, as the contract will be based on satisfactory performance evaluation.

National Programme Manager, Federal Expanded Programme on Immunization, Prime Minister National Health Complex, Park Road Chak Shahzad, Islamabad.
Ph. 051-9255101- Fax. 051-9255086

For more information, please visit deliver.jsi.com.

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