



## SUPPLY/LOGISTICS MANAGEMENT SYSTEM ASSESSMENT

Copyrights © UNICEF Pakistan Photo credits: UNICEF Pakistan Design: Human Design Studios

### TABLE OF CONTENTS

ACKNOW	01		
ACRONYMS			
01			
EXECUTIN	/E SUMMARY	08	
1.1	Background	08	
1.2	Purpose	08	
1.3	Objectives	09	
1.4	Methodology	09	
1.5	Key Findings	09	
1.6	Conclusion	10	
1.7	Recommendations	11	
1.7.	1 Immediate Recommendations	11	
1.7.	2 Medium term Recommendations	11	
1.7.	3 Long term Recommendations	12	
<b>02</b>			
INTRODUC	CTION	16	
2.1	Background	16	
2.2	Country background	17	
2.3	Purpose	17	
2.4	Objectives	18	
2.5	Scope of Evaluation	18	
2.6	Intended audience	18	
2.7	Study's Contribution to the Theory of Change for	18	
	Pneumonia and Diarrhea Project		
2.8	Researcher's Introduction	19	
03			
METHODO	DLOGY	22	
3.1	Phase I: Methodology for Desk review	22	
3.2	Phase II: Methodology of Data Collection	23	
3.2.	1 Key Informants	24	
3.2.	2 Criteria for Selection of Districts	25	
3.2.	3 Public Health Facilities	26	
3.2.	4 Warehouses	26	
3.2.	5 Patient Exit Interviews	26	
3.2.	6 Private Hospitals and Pharmacies	26	
3.2.	7 Health Facilities & Warehouse Visited	26	



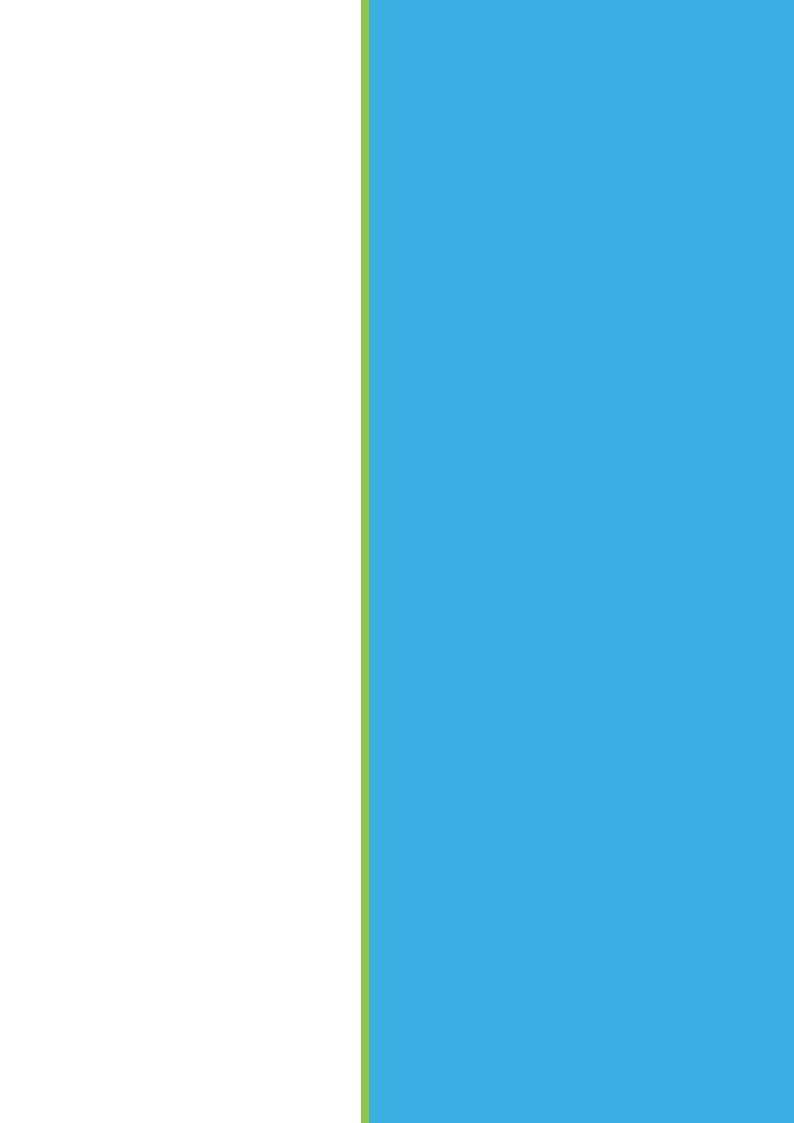






REFE	RENCES		133
09			
ANN	EXURES		67
08			
	7.1.3	Long term Recommendations	63
	7.1.2	Medium term Recommendations	63
	7.1.1	Immediate Recommendations	62
RECO	OMMEND	DATIONS	62
07			
	SONS LE	ARNED	58
06			
CON	CLUSION		54
05			
	4.2.13	Section XIII: Private clinics and pharmacies	50
	4.2.12	Section XII: Patient Exit interviews	49
		Section XI: Product use	49
		Section X: Organizational Support for Logistics system	48
	4.2.8 4.2.9	Section VIII: Warehousing and Storage Section IX: Transportation/Distribution	46 48
	4.2.7	Section VII: Inventory Control	42
	4.2.6	Section VI: Obtaining Supplies/Procurement	41
	4.2.5	Section V: Forecasting	40
	4.2.4	Section IV: Logistics management Information System (LMIS)	39
	4.2.3	Section III: Organization and Staffing	36
	4.2.1	Section II: Product Selection	36
	4.2 4.2.1	Findings Section I: Policy, Legislation and Regulation	36 36
	4.1	Drug Registration Process for local production	34
RESI		D ANALYSIS	30
04			
	3.6	Ethical Standards	27
	3.5	Study Limitations	26
	3.4	Study Management	26
	3.3	Phase III: Methodology for Analysis	26





## **ACKNOWLEDGEMENT**

I would like to express my appreciation for the contribution and cooperation of all of those who were interviewed and whose health facilities were assessed. This Supply / Logistics Management System Assessment would not have been possible without the support of representatives of Federal Director General Health, Secretory Health Punjab and Sindh, Department of Health Balochistan, Department of Health FATA, Department of Health KP, Department of Health Sindh, Primary and Secondary Healthcare Department Punjab, Specialized Healthcare and Medical Education Department Punjab, Planning and Development Department Punjab and Sindh, Drug Regulatory Authority of Pakistan, Integrated Reproductive Maternal Newborn Child Health and Nutrition Program, Maternal, Newborn and Child Health, World Health Organization, USAID, John Snow Inc, Peoples Primary Health Care Initiative, Integrated Health Services, Health and Nutrition Development Society, Nutrition International, Pakistan Pharmaceutical Manufacturer's Association, and stakeholders who participated in inception and dissemination.

I would also like to thank UNICEF Pakistan for their guidance and support in developing this report.

#### **Fuad Hamid**



## <u>ACRONYMS</u>

## **ACRONYMS**

AAT Award/Advance Acceptance of Tender

ADR Adverse Drug Reaction
ARI Acute Respiratory Infection

BHU Basic Health Unit
CEO Chief Executive Officer

CPOES Computerized Physician Order Entry Software

DHIS District Health Information System

DHO District Health Officer

DHQ District Head Quarter Hospital DDHO Deputy District Health Officer

DOH Department of Health
DOS Days of Stock-out

DRAP Drug Regulatory Authority of Pakistan

DT Dispersible Tablet
DTL Drug Testing Laboratory
EDL Essential Drug List

EMA European Medicines Agency
EML Essential Medicines List

EPI Extended Program of Immunization
FATA Federally Administered Tribal Areas

FP Family Planning

FP&PHS Family Planning and Primary Healthcare Services
GAPPD Global Action Plan for Pneumonia and Diarrhea

GMP Good Manufacturing Practices

HANDS Health and Nutrition Development Society

HF Health Facility

HIMS Health Information Management system
HISDU Health Information and Service Delivery Unit
iCCM Integrated Community Case Management

IHS Integrated Health Services

IRMNCH&NP Integrated Reproductive Maternal Newborn Child Health & Nutrition Program

KP Khyber Pakhtunkhwa

LMIC Low and Middle Income Countries

LMIS Logistic Management Information system

LMU Logistics Management Unit

Lo-ORS Low Osmolarity Oral Rehydration Solution

LSAT Logistic System Assessment Tool

LHW Local Purchased
LHW Lady Health Worker

MICS Multiple Indicator Cluster Survey
MOU Memorandum of Understanding
MEA Monitoring and Evaluation Assistant
MIS Management Information System
MNCH Maternal, Newborn and Child Health
MSH Management Sciences of Health

MO Medical Officer

NEML National Essential Medicines List
ORS Oral Rehydration Solution

P&SHD Primary and Secondary Healthcare Department

PITB Punjab Information Technology Board

PPPs Public Private Partners

PPHI Peoples Primary Health care Initiative
PPHSS Punjab Public Health Sector Strategy

RHC Rural Health Center

RMNCAH&N Reproductive Maternal Newborn Child Adolescent Health & Nutrition

SCMS Supply Chain Management system SDG Sustainable Development Goals

SHC&ME Specialized Healthcare and Medical Education Department

SOP Standard Operating Procedure SRO Stringent Regulatory Ordinance THQ Tehsil Head Quarter Hospital

U5 Under 5 years
UN United Nations

USFDA Unites States Food and Drug Administration

UNICEF United Nations Children's Fund

USAID United States Agency for International Development

WHO World Health Organization

WHO LIS World Health Organization Library Information System

## **EXECUTIVE SUMMARY**

## **EXECUTIVE SUMMARY**

#### 1.1 BACKGROUND

UNICEF and Bill and Melinda Gates Foundation established a partnership to contribute to increase the child survival in Pakistan. MG (Melinda Gates) Foundation achieved their goal by improving the process of diagnosis and treatment of Pneumonia and Diarrhea in children less than 5 years of age. The Project "Accelerating policy change, translation and implementation for Pneumonia and Diarrhea commodities in Pakistan", is to be implemented in close coordination of the Government of Pakistan and relevant stakeholders to ensure sustainable changes.

Pakistan has the third highest rate of maternal, Fetal, and child mortality in the world<sup>1</sup>. According to the research in 2010, the mortality rate of children under five (U5) is 89 deaths per 1,000 live births, with 1 in every 11 Pakistani children not surviving to his fifth birthday. Each year, approximately 91,000 children die of Pneumonia and 53,300 children die of Diarrhea. According to Demographic Health Survey of Pakistan 2012-13 a low proportion of children is receiving appropriate treatment. Only 38% of children suffering from Diarrhea are properly treated with Oral Rehydration Solution (ORS) and 1.5% received Zinc. Nearly half of children suffering from Pneumonia received suitable antibiotic. One out of nine children receives no treatment for Diarrhea and 59% of them remain untreated for Pneumonia.

#### 1.2 PURPOSE

The pharmaceutical logistics assessment of Pakistan was carried out through UNICEF and Bill Melinda Gates Foundation. The assessment was particularly conducted for DoH Sindh and Punjab. The provincial level assessment has been conducted for Khyber Pakhtunkhwa, Balochistan and FATA for advocacy purpose.

The main purpose of the assessment was to provide the quantitative data on the supply of selected medicines and commodities at public health facilities and private pharmacies. The assessment was conducted to provide an in-depth situation analysis of pharmaceutical supply chain management system at all levels i.e. National, Provincial, District and Sub-district levels. The health service delivery levels include central warehouse (at provincial and district level), health facility and medicines store (at sub-district level). Vertical programs (IRMNCH, LHW program,PNC, and MNCH) were also assessed to provide the baseline information to track changes and improvement in pharmaceutical supply chain management system. To attain sustainability of availability of Diarrhea and Pneumonia medicines certain measures should be taken for local level production. The study also provides the base line knowledge for the registration of new formulations (Amoxicillin DT and combo pack of ORS & Zinc supplementation) with Drug Regulatory Authority of Pakistan.

DoH and development partners required this information to explore national/provincial drug requirements and to measure the performance of logistics supply chain system. Moreover, they wanted some basic information regarding the duration of availability of essential medicines for Diarrhea and Pneumonia at health facilities and the reasons of stock outs.

<sup>1</sup>Reproductive, maternal, newborn, and child health in Pakistan: challenges and opportunities: Health Transitions in Pakistan, The Lancet Volume 381, No. 9884, p2207-2218, 22 June 2013



#### 1.3 OBJECTIVES

The supply chain management system assessment has following objectives:

- To analyze the current supplies logistic system for Pneumonia and Diarrhea management through in-depth situation analysis for public sector health facilities and vertical programs dealing in management of Diarrhea and Pneumonia.
- To consult with key opinion leaders, decision makers and other stake holders to discuss the existing logistic systems for the procurement and distribution of Pneumonia and Diarrhea medicines within the country especially in - Sindh and Punjab provinces.
- To give practical and logical recommendations to the stakeholders on how updated logistic management information system (LMIS) can be introduced in supply chain management for forecasting, procurement, inventory management, warehousing and distribution and also on linking of revised DHIS tools with LMIS.

#### 1.4 METHODOLOGY

The methodology of assessment is based on mixed analysis that is quantitative and qualitative. The quantitative analysis is established on the data derived from the Logistics System Assessment Tool (LSAT) developed by USAID Deliver Project and recommended by WHO for the assessment of logistics / supply chain management of medicines. However, the qualitative analysis was based on the information gathered through semi structured in-depth interviews.

#### 1.5 KEY FINDINGS

In accordance with the scope of work for this assessment, the pharmaceutical LSAT was used to obtain baseline data for the indicators. The data collected for selected indicators is presented in various tables while the key findings are as follows;

 All the Provincial procurement cells have facilitated the districts by providing central rate contract with prequalified firms except in Balochistan. The health

- department of Balochistan has central procurement of medicines. WHO recommended method of forecasting was not implemented in provinces.
- The teaching hospitals (health facilities) where computerized inventory management software were implemented under the supervision of SHC&ME have shown better result in inventory management based on LSAT assessment i.e. 92%, comparing with DHQ hospitals of Sindh, which were not facilitated with such interventions, have shown 52% results only.
- 3. In Sindh in LHW-LMIS it has been observed, where the definition of SCMS has been modified like the definition of availability of stock was "% of LHW who did not have logistics item available", definition of opening stock balance was "% of LHW who did not have opening balance available for logistic item". Even the DHIS does not give the clear picture of the stock status of tracer elements. Furthermore, the LMIS from health facilities was not web based. The LMIS program of LHWs does not report the stock status of Amoxicillin suspension and Zinc supplement.
- 4. In the public health supply chain system, frequent stock outs were reported. Medicines forecasting was based on consumption methodology which does not fulfill WHO recommendations. Khyber Pakhtunkhwa, however, has adopted mix method approach of medicines forecasting that is consumption + morbidity based forecasting. In Punjab, E-procurement cell has developed the medicines forecasting which is also based on consumption method. By and large, in the vertical program the reasons for stock out were common in all provinces.
- 5. Bulk orders were given to the prequalified manufacturers who were responsible to supply the medicines to all the districts simultaneously. The supplies, however, were not made within agreed time which was one of the contributing factors of stock out.
- 6. In Sindh, the medicines samples were not sent to the Drug Testing Lab for quality assurance on frequent basis. They assumed that prequalified manufacturers do not require laboratory analysis. Another reason was time required by the DTL for submission of analytical reports.
- 7. WHO and NEML 2016 recommend solid oral dosage form of Zinc in the treatment of Diarrhea rather Zinc syrup. In government procurement Zinc Syrup is common as compared to Zinc tablet that was only available at DHQ hospital Bahawalnagar Punjab. Commercially, this syrup was only available in large pharmacies. Zinc syrup contains sugar as sweetening agent which is not recommended by WHO in Diarrhea because it can cause osmotic Diarrhea and hypernatremia. The gap of availability of amoxicillin suspension was observed during the assessment.
- 8. The drug registration process takes 3 to 4 years. Commercial market of Amoxicillin DT and Zinc DT was not established yet. This situation, therefore, could not motivate manufacturer to take interest and get their product registered with DRAP. The drug law "Procedure for Registration of Drugs" clause 2. (v) states "Provided that under special circumstances to be recorded in writing, the Registration Board may register a drug and require such investigations and clinical trials to be conducted after its registration." And clause 2. (ix) further states "Where it is necessary in the public interest so to do, the Registration Board may register a drug on its own motion without having received any application for registration."

#### 1.6 CONCLUSION

- 1. The public health supply chain system was predominantly mixture of "push" and "pull" system. But in case of unavailability of demanded medicines it becomes "Push" system
- 2. The issues of report submission could be resolved with computerized inventory management system
- 3. During the process of LMIS and revised DHIS integration difficulties may occur. These difficulties may be due to different master sheets and SoPs of data entry and results.
- 4. The medicines forecasting and quantification should be based on the WHO recommendations to minimize the stock-outs.
- 5. The storage capacity of medicines at health facility level was not enough. The staff who is handling the pharmaceuticals needs WHO recommended technical knowledge.
- 6. The medicines distribution system from district warehouse to health facility were not based on any forecast criteria. Department of health does not have suitable vehicles for pharmaceutical transportation which creates hurdle in distribution plans
- 7. The process of prequalification of manufacturers was not up to the mark. It does not accurately judge the production capacity of manufacturers. Delays in supplies has been observed from manufacturers.

#### 1.7 RECOMMENDATIONS

#### 1.7.1 Immediate Recommendations

- 1. The inventory of medicines of health facilities should be managed by computerized inventory management system.
- 2. The medicines forecasting should be based on comparison of morbidity and consumption method.
- 3. Immediate steps should be taken for strengthening of DTL of Sindh; for quality assurance of medicines procured for public health facilities.
- 4. The basic technology for integration of LMIS with revised DHIS should be planned for comprehensive data mapping, system synchronization, software updates and aligned with continuous financial and technical support.
- 5. Based on WHO recommendations, Zinc DT should be used instead of Zinc syrup for the treatment of Diarrhea.
- 6. The distribution of medicines should be in the form of complete courses or Kits so that the STG should be followed.

#### 1.7.2 Medium term Recommendations

- 1. Memorandum of Understanding (MoU) should be developed among stakeholders for daily data sharing interface between LMIS & revised DHIS.
- 2. During the consultation with the stakeholders, key performance indicators should be finalized and should be regularly monitored.

- 3. In integrated LMIS and DHIS, STG should be incorporated to develop an automated morbidity based method for medicines forecasting.
- 4. The process of registration of Amoxicillin DT and Co-packing of Lo-ORS and Zinc DT with DRAP should be considered according to the provisions of law; as stated in 2.(v) and 2.(ix).

#### 1.7.3 Long term Recommendations

- 1. The software like "Prescription management Information System" has advantages over inventory management system but it should be modified and upgraded to computerized physician order entry software (CPOES) approach.
- 2. Considering the number of outpatients or services delivered from RHC, pharmacist should be provided for pharmaceutical activities.
- 3. The capacity of warehouses and technical knowledge of staff should be improved.



## INTRODUCTION

# 02 INTRODUCTION

#### 2.1 BACKGROUND

UNICEF and Bill and Melinda Gates Foundation established a partnership, to contribute to increase child survival in Pakistan. This goal was achieved by improving the diagnosis and treatment of Pneumonia and Diarrhea in children less than 5 years of age. The Project "Accelerating policy change, translation and implementation for Pneumonia and Diarrhea commodities in Pakistan", aimed to implement the policies to ensure sustainable changes. The M.G. Foundation worked with close coordination with the Government of Pakistan and the relevant stakeholders. It had an overarching goal to ensure that relevant national policies are revised, understood, and adhered to in order to ensure quality treatment and availability of the essential commodities for improving management of childhood Diarrhea and Pneumonia and increasing child survival by the end of 2019. The project also focused on incorporating Pneumonia and Diarrhea management commodities into essential medicines lists and advocates for increased resource allocation for commodities; it also catalyzed the initial stages of the commodities procurement process with the government authorities and pharmaceutical manufacturing stakeholders. Moreover, the Foundation concentrated on updating and strengthening supply chain and logistics management systems to track the respective commodities. This was done to further supplement the planned work of the project. The commodity availability targets were developed to determine its success, and the results will be documented and disseminated as learning for contemporary in-country initiatives and long-term sustainability. The primary outcomes that are likely to be achieved through this project include the following:

#### **Outcome 1: Policy Change**

Existing national/provincial policies and guidelines are updated in line with global recommendations (WHO/GAPPD) for management of Diarrhea and Pneumonia; among children under five in Pakistan by the end of 2019.

#### **Outcome 2: Policy Translation**

Translation of the revised and updated Pneumonia and Diarrhea treatment guidelines, into relevant action plans, by all provincial/areas health departments, in Pakistan by the end of 2019.

#### **Outcome 3: Policy Implementation**

Availability of essential commodities such as Amoxicillin DT, Zinc DT, co-packed ORS and Zinc suspension, oxygen, ARI timers, and pulse oximeters. It was required for the treatment of childhood Pneumonia and Diarrhea in Pakistan by the end of 2019.

#### **Outcome 4: Knowledge Management**

Translation of lessons learned from this investment, to other settings/broader geographical areas within Pakistan. This four year Project has completed its first six months inception phase (Jan-June 2016). The implementation activities for this project are planned for the remaining period of 2016 and onward.



#### 2.2 COUNTRY BACKGROUND

The Islamic Republic of Pakistan consists of Punjab, Sindh, Baluchistan, and Khyber Pakhtunkhwa, Azad Jammu and Kashmir (AJK), and the territories including FATA and province of Gilgit-Baltistan. The total land area of Pakistan is 796,095 km with an estimated population of 207.8 million<sup>2</sup>. Approximately 64% of the population lives in rural areas (Economic survey of Pakistan, 2013-14, Pakistan Demographic and Health Survey 2012-13) The country is a lower-middle income country with a GDP of US \$ 1,368 per capita (Pakistan Economic Survey 2013-14).

#### 2.3 PURPOSE

Pakistan has the third largest rate of maternal, fetal, and child mortality in the world<sup>3</sup>. As of 2010, the mortality rate of children under five (U5) is 89 deaths per 1,000 live births. This explains that one of the 11 Pakistani children does not survive to his fifth birthday. Acute respiratory infections (ARIs) and dehydration caused by severe Diarrhea are major causes of childhood mortality in Pakistan. Every year, approximately 91,000 children die from Pneumonia and 53,300 children death is caused due to Diarrhea. In total, Diarrhea, Pneumonia, collectively becomes the major cause of death among children in Pakistan<sup>4</sup>. According to Demographic Health Survey of Pakistan 2012-13, a less number of children are receiving appropriate treatment: only 38% of children suffering from Diarrhea receive adequate treatment with Oral Rehydration Solution (ORS) and only 1.5% receives Zinc; only half of children suffering from Pneumonia receive an appropriate antibiotic. Statistically, one out of nine children suffering from Diarrhea receives no treatment, and 59% receive no treatment for Pneumonia. The prevention of these illnesses; nevertheless, is ideal but it is critical to treat them correctly and timely.

Hence, the situation requires a focused revision of the high-level policies; strengthening the training and knowledge of the health care providers, supporting production and procurement of relevant commodities, and improving the supply and logistics systems to track commodity stock and utilization. This study is a corollary to the study on "Budgetary gap analysis of Diarrhea and Pneumonia commodities at provincial/region level".

<sup>&</sup>lt;sup>2</sup>Pakistan Bureau of Statistics Government of Pakistan 2017. http://www.pbscensus.gov.pk/

<sup>&</sup>lt;sup>3</sup>Reproductive, maternal, newborn, and child health in Pakistan: challenges and opportunities: Health Transitions in Pakistan, The Lancet Volume 381, No. 9884, p2207-2218, 22 June 2013

Interventions to address deaths from childhood Pneumonia and Diarrhea equitably: what works and at what cost?
The Lancet, Volume 381, No. 9875, p. 1417-1429, 20 April 2013.

#### 2.4 OBJECTIVES

The objectives of the analysis are as follows:

- Review the existing supply management system at National, Provincial, District and Sub district levels.
- To analyze the current supplies logistic system for Pneumonia and Diarrhea management, through in-depth situation analysis. For the public sector health facilities and the vertical programs dealing in management of Diarrhea and Pneumonia.
- To consult with key opinion leaders decision makers and other stake holders to discuss the existing logistic systems for the procurement and distribution of Pneumonia and Diarrhea medicines within the country especially in Sindh and Punjab provinces.
- To give practical and logical recommendations to the stakeholders on how to upgrade logistic management information system (LMIS); that can help in forecasting, procurement, inventory management, warehousing and distribution and also on linking of revised DHIS tools with LMIS.
- To review the process of registration of pharmaceutical items by Drug Regulatory Authority of Pakistan. It also aims to submit recommendations to get this process expedited for registration of essential drugs for management of Pneumonia and Diarrhea.
- To document all above objectives in detail with in-depth situation analysis.

#### 2.5 SCOPE OF EVALUATION

In-depth situation analysis of commodities and supplies of logistic system at national, provincial, district and sub-district levels, related to Pneumonia and Diarrhea, has helped to determine the situation of SCMS. It also defines the existing policies and their relevance with recommendation of GAPPD, gaps in SCMS which include; product selection, situation of staffing, LMIS, forecasting & quantification, procurement, inventory management, warehousing, distribution of medicines, organizational support for logistics, rational utilization of drugs and situation analysis of private sector in Diarrhea and Pneumonia management.

The role of Public Private Partners (PPHI, IHS and HANDS) is strengthening of department of health. Strengthening of Public Private Partners was considered as strengths of concerned department of health. Individual assessment of PPPs was not included in the scope of the study.

#### 2.6 INTENDED AUDIENCE

The intended audience includes policy makers, government officials, stakeholders and not-for-profit organizations who deal with strengthening and capacity building of SCMS and integration of LMIS with revised DHIS. Report will also facilitate those stakeholders and firms who require new product registration from DRAP.

## 2.7 STUDY'S CONTRIBUTION TO THE THEORY OF CHANGE FOR PNEUMONIA AND DIARRHEA PROJECT

WHO has defined logistics as an art of supply and maintenance. It involves a scientific discipline and utilization of the management principles. Logistics for peripheral health facility as provision of activities including planning, budgeting, receiving and inspection, storage, inventory control, supply, distribution. Besides it includes the transportation, maintenance and repair, communications, environmental

management of health facilities, record and reporting, supervision and logistics training<sup>5</sup>.

In LMIC, lower buying power of patients, hinders the access to essential medicines; leading them to opt alternate therapies especially in rural areas. It has also observed, that inappropriate prescription and dispensing of medicines; creates the gaps to access the essential medicines<sup>6</sup>. WHO, described, that one of the key component of the functioning health system; is provision of access to affordable, appropriate and high quality medicines. The access of essential medicines; is the outcome of integration of finance, planning, service delivery, and information management and governance system<sup>7</sup>.

The studies conducted in different areas of Pakistan have also referred the issues of the supply chain management of medicines in public sector. The access to medicines is a big challenge for poor in Pakistan. One of the issues regarding the access to essential medicines, as reported in different studies; is, that the government spends very little on health sector. It has also been reported, that such issues include lack of policies legislation and regulation, wastage of resources, mismanagement, lack of knowledge and capacities and infrastructures etc.

The in-depth situation analysis of the supply chain management of medicines, will help in analyzing the SCM system of public sectors through WHO's recommended procedures and guidelines. The results of the analysis, will support the recommendations for policy or procedures change; to improve the access of essential Medicines to combat Diarrhea and Pneumonia.

#### 2.8 RESEARCHER'S INTRODUCTION

The study has been conducted by Public health consultant who is pharmacist by profession. Previously he has worked for WHO, TRF plus, GAIN and other multinational pharmaceutical industries.

Stattersby, A., & World Health Organization. (1985). How to assess health services logistics with particular reference to peripheral health facilities. World Health Organization. (2008). Medicine prices, availability, affordability and price components: a synthesis report of medicine price surveys undertaken in selected countries of the WHO Eastern Mediterranean Region.

<sup>&</sup>lt;sup>7</sup>World Health Organization. (2004). **WHO Medicines strategy 2004-2007: countries at the core.** 

## METHODOLOGY

# O3 METHODOLOGY

The methodology of assessment is mixed analysis that is quantitative and qualitative analysis. The quantitative analysis is based upon the Logistics System Assessment Tool (LSAT) developed by USAID Deliver Project and recommended by WHO<sup>8</sup> for the assessment of logistics / supply chain management of medicines. As per the recommendation of LSAT for devolved health system, all provinces to be studied should be assessed separately; with recommended modifications of health service delivery levels, as described in the tool. The qualitative analysis is semi structured in-depth interviews based upon the desk review.

The provincial level assessment has been conducted for Sindh, Punjab, Baluchistan, KP and FATA. The district and sub-district level assessment has been conducted only for Sindh and Punjab because the project funding was for these two provinces. The other provinces were assessed for advocacy purpose.

The details of the methodology is as follows

#### 3.1 PHASE I: METHODOLOGY FOR DESK REVIEW

The methodology adopted for the extraction of research papers from internet was as follows

#### TABLE 1: METHODOLOGY OF DESK REVIEW

Online Search	Search Terms	Research Inclusion Criteria
Electronic databases searched:	Pharmaceutical Supply Chain	Primary research studies, reviews,
PubMed, Cochrane, Cinahal,	Management, Drug Supply and	case reports. Excluded: opinion
WHOLIS, MSH, ELDIS, Google	Pakistan, Rationale Drug Use	pieces, commentary articles, bio-
Scholar.	and Pakistan; Drug Financing	efficacy studies.
Websites searched:	and Pakistan; Drug Affordability	Grey Literature: Policy Acts, Policy
Provincial Departments of Health,	and Pakistan; Drug Access	Guidelines, Policy or strategic
WHO Pakistan, WHO-EMRO and	and Pakistan; Drug Availability	frameworks, National formulary.
Pakistan Consumer Protection	and Pakistan; Drug Policy and	
Network.	Pakistan; Pharmaceutical Policy	
	and Pakistan. Searches conducted	
	during last five years period.	

<sup>&</sup>lt;sup>8</sup>World Health Organization. (2010). **Monitoring the building blocks of health systems: a handbook of indicators and their measurement strategies** (p. 20). Geneva: World Health Organization.



Using the PubcMed search engine "Pharmaceutical Supply Chain Management" 144 results were found, six from Cinahal and operational framework from WHOLIS. Abstracts and summary reports were reviewed. There were 86 studies that were further shortlisted for detailed study. Free full text researches and documents shared by government in their websites were studied and referred in the desk review. Complete desk review and references are shared in Annex 1.

## 3.2 PHASE II: METHODOLOGY OF DATA COLLECTION

The indicators for the assessment have been divided into following levels

- Assessment at National Level
- Assessment at Provincial Level
- Assessment at District and Sub-District Level

Following are the categories of the indicators based upon the LSAT Tool. As per the recommendations of LSAT the scoring of sub-indicators were modified for devolved healthcare system. A complete set of indicators of modified scores are attached in Annex 2.

#### **TABLE 2: CATEGORIES OF INDICATORS**

Section #	Categories of Indicators
1	Policy, Legislation and Regulation
2	Product Selection
3	Organization and Staffing
4	Logistic Management Information System
5	Forecasting
6	Obtaining Supplies / procurement
7	Inventory Control Procedures
8	Warehousing and Storage
9	Transport and Distribution
10	Organizational Support for Logistics
11	Product Use
12	Patient Exit Interviews
13	Private sector; Availability of services and medicines

#### 3.2.1 Key Informants

The selection of key informant was based on the role of the informant in public health department. Special care was taken in selecting the most suitable person to respond to the questionnaire.

TABLE 3: LIST OF KEY INFORMANTS AT NATIONAL LEVEL

Sr. #	Key Informants	National Level
1	DRAP	X
2	EM WHO	X
3	MNHS R&C	X
4	Federal DG Health	X

#### TABLE 4: LIST OF KEY INFORMANTS AT PROVINCIAL LEVEL

Sr.	Key Informants	Punjab	Sindh	KP	Baluchistan	AJK	FATA
#							
1	DG Health	Х	Χ	Х	X	X	Х
2	Director MSD	X			X		
3	Director IRMNCH & NP for FP & PHC	Х	Х	Х	X	X	X
4	Chief Pharmacist (Purchase cell)	Х	X	X	X	X	X
5	Store keepers	Х	Χ	Х	X	Х	Х
6	PPHI / HANDs / IHS		Χ				
7	Specialized Hospital / DHQs	Х	Х				

TABLE 5: LIST OF KEY INFORMANTS AT DISTRICT AND SUB-DISTRICT LEVELS

Sr. #	Key Informants	District Level				Suk	Sub-District Level			
		CEO / EDO (H)	Central Ware- house	Coordinator LHW Program or IRMNCH & NP	Warehouse or IRMNCH & NP	DHQ hospi- tal	THQ hospi- tal	RHC	вни	
1	CEO / DHO	Х		X						
2	Head			X						
3	MS					Х				
4	HF in-charge						Х	Х	Х	
5	Pharmacist		Х			Х	Х			
6	Store keepers		X		X	Х	Х	Х	Х	
7	LHW & CMW								Х	
8	Patient exit interview					Х	Х	Х	Х	
9	Private sector doctor and pharmacy						Х	X	Х	

#### 3.2.2 Criteria for Selection of Districts

On the basis of the data of disease episodes provided by the Bureau of Statistics of Pakistan Multiple Indicator Cluster Survey (MICS) Sindh, 2014<sup>9</sup> and the Multiple Indicator Cluster Survey Punjab, 2014<sup>10</sup> following district has been selected for the assessment. For Sindh, the criteria for the selection of districts was as follows

- One district from each division has been selected for comprehensive review of supply chain management system of the province except in DG Khan Division of Punjab where an additional district (Rajanpur) was selected on the request of the DoH.
- Districts showning high percentage of disease episodes of Diarrhea & ARI, for example, symptoms in MICS 2014.
- Districts administered through Health Department of Sindh, Public or private partnership, in order to get the comparative situation of supply chain management cycle.
- Good performing districts and bad performing districts; based on the treatment of Diarrhea and ARI, for example, symptoms taken from public sector.

TABLE 6: CRITERIA FOR SELECTION OF DISTRICTS

Province	Divisions	Districts	Percentage of	f episodes of
			Diarrhea	ARI symptoms
Sindh	Larkana	Kashmore	32.4	16.9
	Sukkur	Sukkur	33.8	20.3
	Hyderabad	Tando Muhammad Khan	31.2	9.0
	Mirpur Khas	Tharparkar	23.4	9.5
	Karachi	Karachi Malir	28.8	10.8
	Shaheed	Shaheed	26.9	5.8
	Benazirabad	Benazirabad		
Punjab	Bahawalpur	Bhawalnagar	11.5	3.2
	DG Khan	Muzaffargarh	18.8	5.0
	DG Khan	Rajanpur	22.8	5.5
	Sahiwal	Pakpattan	19.4	3.8

Sindh Multiple Indicator Cluster Survey (MICS) 2014, Final Report. http://sindhbos.gov.pk/wp-content/uploads/2014/09/01-Sindh-MICS-2014-Final-Report.pdf

<sup>&</sup>lt;sup>10</sup>Punjab Multiple Indicator Cluster Survey (MICS) 2014, Final Report. http://www.bos.gop.pk/mics2014

#### 3.2.3 Public Health Facilities

A District Headquarter hospital, a Tehsil Headquarter Hospital, RHC and two BHUs have been visited to assess the medicines supply chain management system. The selection of BHUs was based on the distance from the central medicines distribution point, to assess the bottlenecks of medicines distribution and lead time.

#### 3.2.4 Warehouses

Provincial central warehouse, district central warehouse, district warehouse of vertical program, health facilities medicine store of above mentioned districts have also been visited for the assessments of the storage conditions of medicines.

#### 3.2.5 Patient Exit Interviews

Caretakers of the children with Diarrhea were interviewed to evaluate the provision of medicines and dispensing practices of the hospitals. Five caretakers of Pneumonia or Diarrhea patient from each health facility were planned.

#### 3.2.6 Private Hospitals and Pharmacies

Five private practitioners and pharmacies were selected based upon the information provided by the respondents of households

#### 3.2.7 Health Facilities & Warehouse visited

Apart from the provincial offices, sample size for the collection of the data was 64 including warehouses and health facilities out of which 38 from Sindh and 26 from Punjab were visited.

#### 3.3 PHASE III: METHODOLOGY FOR ANALYSIS

The data of the quantitative indicators has been analyzed using LSAT analytical score. The LSAT recommended scores as mentioned in Annex 2

#### 3.4 STUDY MANAGEMENT

The study was managed by the preparation of "Inception Report" which was reviewed by UNICEF and presented to stakeholders in quarterly meeting of "Technical Working Group on Child Survival". The suggestions were incorporated. The Government was taken on board for the collection of data. Official letters from the government were issued. Data was collected and analyzed. Draft report was presented to UNICEF which was reviewed internally and suggestions and comments were incorporated. Findings of the report were presented to the stakeholders in "National Technical Working Group on RMNCAH & N".

#### 3.5 STUDY LIMITATIONS

The time for data collection and key informant interviews was limited. The patient exit interviews were limited to the availability of caretakers of patients at the time of assessment. As described in the scope of the study, the assessment was limited to department of health. The contributions of PPHI, IHS, HANDS and Micronutrient Initiative (now called Nutrition International) were considered as strengths of department of health. The district of Punjab in which Nutrition International was working was not included in the study. Their financial contributions were described in budgetary gap analysis study.

#### 3.6 ETHICAL STANDARDS

The study will follow strict ethical guidelines associated with undertaking quantitative and qualitative research. The consent has been taken from key informants before starting the interview. During the interview socio-culture context were kept in view. No interviews were planned or conducted from children. The study has ensured that the research should not in any way harm the respondent. The report has not included any direct or indirect identification information of research participants. All ethical standards of UNICEF were followed.

## RESULTS & ANALYSIS

### RESULTS & ANALYSIS

The main focus of the assessment findings were Policy, legislation and regulation, Product selection, Organization and Staffing, Logistics management information System, Forecasting, Procurement, Inventory management, Warehousing. Moreover, the assessment of storage, Transportation & Distribution, Organizational support for logistics and Rational utilization of medicines, registration of new formulations of amoxicillin dispersible tablet with Drug Regulator Authority of Pakistan. The major findings of the assessment were as follows.

#### 1) National Essential Medicines List:

Pakistan has National Essential list based on which provincial EML were prepared. Provinces have procurement rules of medicines which restrict the DoH to procure the medicines only from the Provincial Essential Medicines List, or, if required, from NEML. The strict rules for medicines selection from NEML, have strengthened the product selection of SCMS.

#### 2) Logistic Management Information System:

The status of LMIS was more or less similar in Sindh and Punjab. The situation of vertical program was also same in both provinces.

#### 3) Forecasting:

The quality of forecasting is based on the availability of data. The impact of LMIS on forecasting gave the same results.

#### 4) Procurement:

At the districts of Sindh and Punjab, procurement process was similar LSAT scoring that is 53%. While the score of Specialized healthcare and medical education (SH&ME), was 70%, which was the highest percentage in the public sector.

#### 5) Inventory control:

The inventory control procedures of SH&ME hospitals i.e. DHQs of Punjab has shown better results of assessment that is 92%. It was mainly due to the development and implementation of medicines Inventory management software. The situation of the districts in Punjab was also better; due to the introduction of e-procurement system.

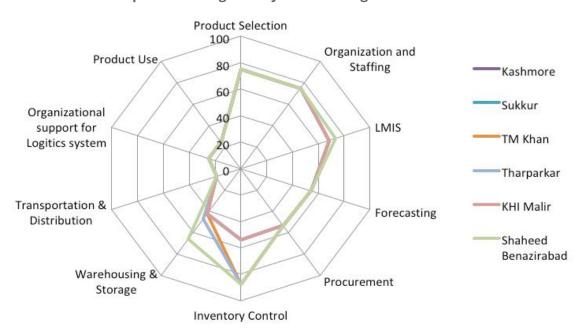
#### 6) IRMNCH & NP:

IRMNCH & NP has totally changed the routine method of medicines distribution. They had outsourced the transportation process of medicines to a courier company.



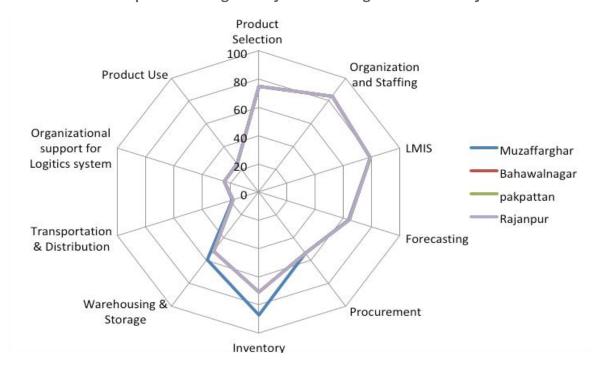
### GRAPH 1: COMPARISON OF LOGISTICS SYSTEM OF DEPARTMENT OF HEALTH AMONG DISTRICTS OF SINDH

Comparison of Logistics Systems among Districts in Sindh



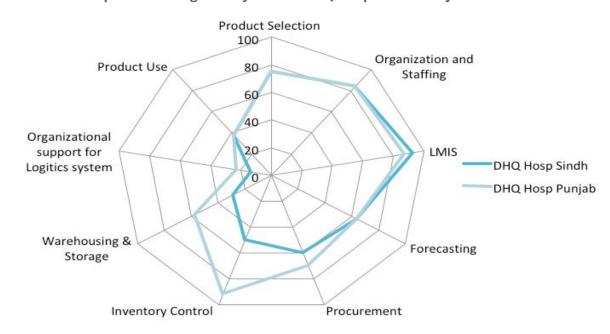
GRAPH 2: COMPARISON OF LOGISTICS SYSTEM OF P&SHD AMONG DISTRICTS OF PUNJAB

**Comparison of Logistics Systems among Districts of Punjab** 



### GRAPH 3: COMPARISON OF LOGISTICS SYSTEM OF DHQ HOSPITALS OF SINDH AND PUNJAB

Comparison of Logistics System of DHQ Hospitals of Punjab and Sindh



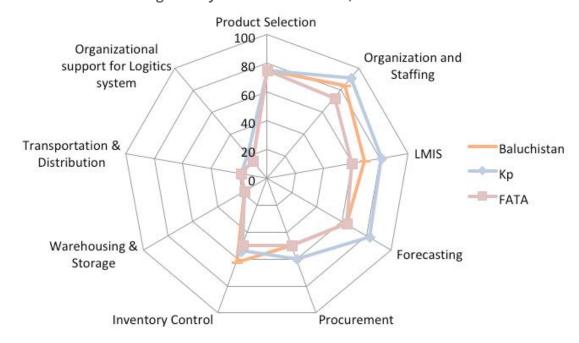
GRAPH 4: COMPARISON OF LOGISTICS SYSTEM BETWEEN NP FP&PHS AND IRMNCH&NP

**Comparison of Logistics Systems among Districts of Punjab** 



### GRAPH 5: LOGISTICS SYSTEM OF BALUCHISTAN, KP AND FATA

### Logistics System of Baluchistan, KP and FATA



### 4.1 DRUG REGISTRATION PROCESS FOR LOCAL PRODUCTION

Diarrhea and Pneumonia are major causes of mortality among children under five in Pakistan. The availability of first line therapy, is one of the major challenges to the management of such diseases. Pharmaceutical industry is one of the growing industries of Pakistan.

The medicine essential for the management of these diseases are

- i. Low osmolarity ORS already registered and frequent in production.
- ii. Zinc Dispersible Tablet already registered but not frequent in commercial market
- iii. Amoxicillin Dispersible tablet not registered in Pakistan
- iv. Co-packing of Low osmolarity ORS and Zinc Tablet not registered in Pakistan.

The production of Lo-ORS and Zinc DT is easily available, while the drugs like, amoxicillin DT and Co-packaging, required registration with Drug Regulatory Authority of Pakistan (DRAP) for local production. Any manufacturing industry having capacity to manufacture "tablet" and "powder" can apply for the registration of co-pack.

Drug Act 1976, regulates the import, manufacture, storage distribution and sale of the drugs. These drugs are registered under section 7 of drug act 1976. Registration board is the authority of registration of drug.

It was observed that period of 3-4 years is required by the DRAP for the completion of registration. Already many applications, committee meetings, industrial inspections are still pending and the number is increasing day by day. For the registration of these medicines, the shortest possible time and the helpful provision of rules of drug registration should be considered. These rules are described in clause 2 (v) and 2 (ix).

Recently 7.1% chlorhexidine digluconate gel has been registered with DRAP. The process of registration was based on the morbidity needs which were described by the UNICEF. Details of the process has been shared by DRAP in minutes for 247<sup>th</sup> meeting of Registration Board held on 4th February 2015<sup>11</sup>. The process of the registration of the Drugs is briefly described here; while detail is mentioned in Annex 3.

### Clause 2. (V)

The Registration Board shall, before registering a new drug for which the research work has been conducted in other countries and its efficacy, safety and quality has been established therein, require the investigation on such pharmaceutical, pharmacological and other aspects, to be conducted and clinical trials to be made as are necessary to establish its quality and, where applicable, the biological, availability, and its safety and efficacy to be established under the local conditions: Provided that under special circumstances to be recorded in writing, the Registration Board may register a drug and require such investigations and clinical trials to be conducted after its registration.

### Clause 2. (IX)

Where it is necessary in the public interest, so to do, the Registration Board may register a drug on its own motion without having received any application for registration.

### 4.1.1.1 Steps for registration of new formulation

- 1. The process of registration, for the new formulation, particularly Amoxicillin DT and packaging of ORS & Zinc supplementation consists of the following steps: Collection of reference material, preparing the desk review of impact analysis of Amoxicillin DT and ORS and Zinc co-packaging in other countries.
- 2. It also involves the consultation with Pharmaceutical Bureau, Pharmaceutical Manufacturing Association, Research & development of DRAP and other stakeholders, for preparation of comparative study of different formulation of the subjected medicines in Pakistan. The stakeholders include UNICEF, WHO, R & D of DRAP, Health Department of all Provinces, Pharmaceutical Bureau, Pharmaceutical Manufacturing Association of Pakistan, Pakistan Pharmacist Association, United State Pharmacopeia Pakistan and Nutrition International.
- 3. With consultation of PMA, selection of those pharmaceutical industries that are already registered with DRAP for manufacturing of Zinc DT and ORS for Co-packaging of ORS and Zinc supplementation. Amoxicillin DT needs bilateral discussion with DRAP and other stakeholders.
- 4. Preparation of bilateral meeting documents including invitation letters agenda, and studies, that has to be shared with participant etc.
- 5. Coordinate lobbying / Advocacy Bilateral meeting
- 6. Submission of final report of lobbying / Advocacy bilateral meeting (including minutes, conclusion and recommendations)

### 4.1.1.2 Potential Manufacturer for Registration

In discussion with Pakistan Pharmaceutical Manufacturers Association (PPMA), a manufacturer has been introduced, who is interested in registration of Co-package of ORS and Zinc DT and Amoxicillin DT. The manufacturer was already registered for Zinc DT with DRAP and soon they will receive the registration of ORS.

<sup>&</sup>lt;sup>11</sup>Minutes of 247th Meeting, Registration Board held on 04th February, 2015.

### 4.2 FINDINGS

### 4.2.1 Section I: Policy, Legislation and Regulation

Pakistan has National Drug Policy, but does not clarify the duty taxes on import of donated items. The SRO notification of Government of Pakistan through DRAP, MNHS R&C, explains the exemption of the duty and taxes on import of drugs for donation in Gazette of Pakistan.

The law and regulation of Pakistan promotes the local manufacturing of medicines, rather than, the import of finished drug from other countries; but in public interest, the import is allowed. The drug policy encourages the access of medicines at health service delivery sites. It also promotes or encourages the access of patient for utilizing the services by improving the availability of medicines at HF. In Punjab, on the other hand, public awareness has also been created through TV and print media. Provincial details are as follows

### 4.2.2 Section II: Product Selection

The product selection of medicines for procurement and availability at the service delivery site were based on the National Essential Medicines. All the products except Zinc solid oral dosage form selected for the procurement were from National Essential Medicines List, which was available on official website of DRAP. NEML, has been used for the development of provincial essential medicines list, and the list of medicines for central rate contract. The criteria for the selection of any product for essential medicines list, was WHO recommendations and disease burden. It has been observed that Zinc syrup was procured rather Zinc solid oral dosage form. The essential packages for health services were available for Punjab, Sindh and Khyber Pakhtunkhwa. The services included in EPHS were: Immunization, Antenatal , Natal and Postnatal care, Inter-natal care, prevention of STI and RTI, FP service, Major Micronutrient deficiencies, mental health, screening, outreach services for all levels of health facilities. The survey conducted, was primarily for assessment of Diarrhea and Pneumonia medicines which include ORS, Zinc supplementation, and Amoxicillin suspension which were part of essential medicines list for all the provinces.

Diarrhea and Pneumonia are vaccine preventable diseases. Rota virus was the major contributor of deaths of children suffering from Diarrhea in Pakistan. In Punjab vaccine for Rota virus and Pneumonia were included in routine EPI while in Sindh Pneumonia vaccine is included in routine EPI

### 4.2.3 Section III: Organization and Staffing

### **Logistics Management Unit (LMU):**

According to WHO, LMU, is a management structure that can be used to organize, monitor and support all the activities within the logistics system. Through the lens of continuous improvement; LMU identifies the Supply Chain problems, develop solutions and implement those interventions. LMU is an important link between the different organizations, levels, and actors within the supply chain.

LMU were available in all provinces. It was responsible for managing and using the logistics management information system, forecasting, procurement, inventory management and distribution. The selection of product was in consultation with the Districts. It was also responsible for the supervision and development of logistics staff.

- Although, at the provincial level, the activities were facilitated by specific units, for the procurement of the medicines; like: Procurement cell / Procurement Committee in all provinces and Medicines Coordination Cell like the one in KP. The key logistics tasks were assigned to either of it. The activities used to coordinate key logistics tasks among those responsible for logistics were official letters, meeting and joint work plans etc.
- Such staff members (who are employed for other departments and had other departmental responsibilities as well) had to perform logistics tasks. It was observed, that the system lacks the dedicated HR, to carry out key logistics task with powers and authority and make prompt decisions. The logistics activities could be best performed by a qualified person with pharmaceutical as well as SCM knowledge. The DHQs hospitals, were facilitated with the sufficient number of Pharmacists. It was, therefore, observed that the logistics system was better at DHQs as compared to the hospitals like RHCs, where the pharmacist was not available. The vertical programs have dedicated logisticians but SCM tasks were not achieved. It was observed that Standard Operating Procedures were also not available at all service delivery levels. The logistics system has one year plan in all provinces. The smooth functioning of the supply chain system was affected by transporters strikes, resulting in the delays of supplies from manufacturers and eventually, it led to the delay in the budget release.

### Sindh:

LMU was available at provincial level but it was not integrated as in Punjab. It was fully responsible for managing and using LMIS, procurement, inventory management, product selection, supervision and logistics staff development. The product selection and forecasting were mainly done at district level under the supervision of DHOs. A single line budget was available with DHO and some HF who could exercise DDO authority. They are capable of managing their logistics budget from it. Health facilities with DDO power also have single line budget.

- SoP or guidelines for medicines forecasting and quantifications were not provided at the district levels.
- The Central Level Position, dedicated for logistics is mainly in the district. The logistics officers can exercise the same authority as any other functional unit head can.
- The logistics responsibilities were managed by DHO, store keeper at the district level while at DHQ Hospital there are Hospital Pharmacist and Store Keepers.
- The Public Private Partners (PPHI, IHS and HANDS) of the Sindh, have LMUs, which were indirectly supporting the government health facilities within their scope of work as described in their contracts. In Sindh, almost all the BHUs are handled by PPP except in the District Shaheed Benazirabad and Karachi. They facilitated the government for the product selection, forecasting, procurement, distribution inventory management, storage, staffing for logistics, financing for logistics and supervision. The government of Sindh procures medicines for THQ / RHCs (not handed over to IHS). As PPP, is facilitating the government so their strengths and capacities were reflected as government services. Their SCM activities were under the supervision of the dedicated logistics staff, showing best performance in their work. Although, they are facilitating the government, in terms of services and access to medicines. All indicators, were applied on these organizations as well, in order to explore the strengths of the system and to compare it with the government supply chain system. Such comparisons will help the government to adopt the strengths of service delivery standards; so that, at the time of exit of PPP service delivery, the standards will remain the same, especially in terms of SCMS.

### Punjab:

LMU comprises "e-Procurement and Inventory Management Unit" which was an integrated system of medicines procurement. It has established central level position of logistics management in which districts procurement, drug testing labs and prequalified manufactures were involved. It also facilitates the medicines forecasting or preparation of rational demand based on the availability of the budget and the manufacturer's capacity. The responsibilities of logistics, other than procurement, such as, inventory management, staffing and the product selection were served by the district team, under the supervision of CEO.

- SoP of medicines forecasting and quantification (based on WHO guidelines) has been provided to all districts through PSPU with the support of TRF plus in the form of forecasting and quantification tool. While after the establishment of Primary and Secondary healthcare Department, the system has been modified and incorporated in the e-procurement.
- The activities used to coordinate key logistics tasks, besides those responsible for logistics were official letters, meeting including online meetings and joint work plans.
- In DHQs, mainly Pharmacist was responsible for logistics management, while hiring of logistics officers at DHQ and THQ was in progress.

### **Balochistan:**

MSD and PPHI collectively takes the responsibility of LMU. The role of MSD in the procurement of medicines while rest of all the responsibilities like distribution, inventory management etc. has been done by PPHI.

• The MSD, acts as central level position for the procurement of medicines, while handling and inventory management is being done by the store keepers.

### Khyber Pakhtunkhwa:

In Khyber Pakhtunkhwa, at provincial level, LUM was Procurement cell and Medicines Coordination cell (MCC). The districts were facilitated with logistics staff.

- The MCC, provides the central rate contract list of prequalified manufacturers, while the product selection and forecasting is done at districts level. Handling, inventory management and warehousing is mainly done by logistics officers and storekeepers at district level.
- The logistics officers have the same level of authorities for decision making as the other functional unit heads

### FATA:

The procurement is managed by procurement committee / cell. Forecasting of medicines is consumption based, which does not fulfill the WHO recommendations.

The central level position of logistics is managed at agencies. The activities used to coordinate key logistics tasks among those responsible for logistics were official letters and meeting. The key logistics positions were DHO and Store Keeper, Agency, and the Store keepers.

### FP&PHS / IRMCNH & NP

- The vertical programs have already selected products, so there is no role of LMU in selection
  of products. The activities used to coordinate key logistics tasks among those responsible
  for logistics were official letters, meeting and work plans. The logistics staff include Logistics
  Coordinator at provincial level, the Store Keeper at District level,
- In Punjab IRMNCH & NP has recently modified the SCM system and quantities of medicines for LHWs have increased. In future, Forecasting will be based on the updates of the modified quantities. The distribution of medicines has been planned through courier/ parcel system.

### 4.2.4 Section IV: Logistics management Information System (LMIS)

The logistics Management Information System in Public health facilities was manual and computerized. The computerized system does not show the complete flow of medicines; from the receiving till the consumption. In different provinces different efforts were made to get maximum information of the logistics management.

In all provinces DHIS gave the information of stock out status of tracer elements at health facilities. DHIS provides the status of stock out only in yes and no format. This is not sufficient as it should also provide information of stock levels. Due to an incomplete information stock status (functional stock out) were not reported. Vaccine LMIS (vLMIS) was available but data was not updated regularly from all districts.

**In Sindh** manual LMIS was implemented which gave the information of stock procured, issued etc. The sharing of manual stock reports; from HF to the District level was not regular. The health facilities should also be monitored to get actual situation of stocks.

**In Punjab,** Specialized Healthcare and Medical Education Department has developed a web based computerized software for medicines inventory management at teaching hospitals, DHQs etc. this software gave real time stock status. The software shares information of status of stock outs, near expiry medicines, stock in hand, stock issuance etc. with all logins.

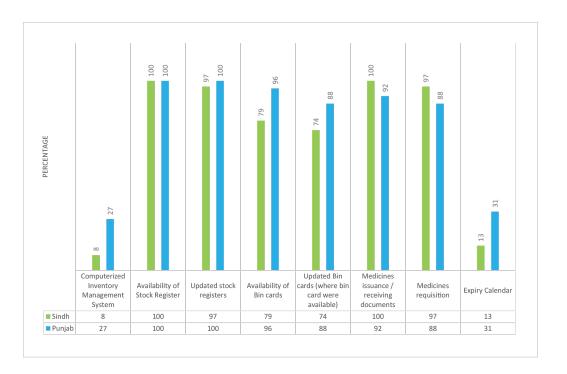
Health Information and Service Delivery Unit has launched Primary and Secondary Healthcare department. At the time of assessment, it was observed that online information including HR, logistics information of vaccines, contraceptive, TB, Information of DHIS etc. were shared at one dashboard. It was reported, that their next phase will be interlinking information from all segments, and making it more useful and result oriented. HISDU has also prepared a "Prescription Management Information System" which will track the medicines record from the receiving till the issuance to the patient. It will also link with inventory management system.

Simultaneously, the stock status was also monitored by Monitoring and Evaluation Assistants (MEAs) and they prepare monthly report of the stock status of very essential / tracer elements. The Health department, rely more on the reports of MEAs because it was considered as an external evaluation / physical count of stock status. This report indicates overall performance of health facility.

Vertical programs i.e. FP&PHS and IRMNCH & NP have their own MIS covering specific indicators and they depend more on their MIS rather DHIS. The LHW program reporting mechanism is both manual and computerized.

Ideally, the information provided by the LMIS; should be compiled and performed as automated functions of logistics activities. As observed the LMIS / DHIS / MIS focused the stock out status and report. There must be more automated systems to support the forecasting, resupply, transportation, monitoring of medicines dispensed to the patients as per WHO standards.

### STATUS OF INVENTORY CONTROL IN SELECTED DISTRICTS OF SINDH AND PUNJAB



### 4.2.5 Section V: Forecasting

It has been observed that methodology adopted for the medicines forecasting and quantification was consumption based, in which, there was no adjustments of days of stock out. Stock for lead time, and time required for the laboratory analysis were not included. Buffer stock was considered; but the methodology for calculation of buffer stock was not correct. Review period for the forecasting was one year; which caters the seasonal variations. It was also observed, that the irrational use of medicines was due to the unavailability (stock out) of first line therapy which not only creates financial burden, but also was not appreciated and recommended by WHO. The activity of medicines forecasting requires financial support; it also depends on how much data is required to be collected and analyzed. It is one of the hidden costs of the supply chain management system. It was also discovered, that medicines forecasting need proper budget allocation. This situation was observed in all districts of Sindh, Punjab, Baluchistan, KP and FATA.

In Punjab, the Primary and secondary Healthcare Department has developed e-Procurement system, which is organized through software developed by Punjab Information Technology Board. It is a system through which the medicines were forecasted, based on the consumption based methodology provided by Policy and Strategic Planning Unit (PSPU). The system has improved the availability of medicines in tertiary care hospitals / teaching hospitals. The need to compare the consumption based methodology with morbidity based forecasting is still required to promote the rational utilization of medicines.

In Khyber Pakhtunkhwa, particularly in Health department, the medicines forecasting became a part of their agenda. They had developed the computerized tool for medicines forecasting and quantification. This tool developed for KP health department was able to conduct forecasting of all health facilities, with both techniques i.e. morbidity and consumption method based on WHO recommendations. It was observed that the data provided by the DHIS for morbidity

based forecasting and quantification had limitations which created hurdles for the morbidity based medicines forecasting and quantification methodology.

In Sindh, the Public private partners (PPHI, IHS, and HANDS), considered the importance of morbidity based forecasting and quantification. As per the recommendation of WHO, if there were no stock out, consumption based methodology can also be applied. The comparison of morbidity, consumption based method of forecasting and quantification; promotes the rational utilization of medicines. It was observed that PPP compared the consumption based and morbidity based forecasted data. Such techniques should be shared with the government staff for the capacity building.

### 4.2.6 Section VI: Obtaining Supplies/Procurement

Procurement is the process of purchasing supplies; directly from national or multinational, private or public supplier.

Procurement of medicines in public sector followed the government procurement rules. For larger quantities, the process of bids was followed. The bidding process is based on the estimated quantities from the districts. While with the estimating budget, special care is required for procurement of the medicine and equipment. This includes the actual expenditure incurred from Jan to May 2017, and the estimated needs for the remaining days of May & June, 2017. This will cater to the immediate need of payments, required for the medicine, procured at provincial level in "centralized procurement" mode. Following the government rules, the technical specification and financial specifications were acknowledged. The lowest bidders were contracted for the supply of medicines. It is stated, that the quality of the products should be according to the standards of drug act.

**In Sindh:** According to the "Bid Documents for Procurement of drugs by procuring agencies of Sindh," in General Condition, it is stated that the chemical and physical examination of medicines shall be carried out through the provincial drug testing laboratories.

It has been observed and reported by health department Sindh; that the provincial drug testing laboratory is not properly functioning, hence, according to the government procurement rules "the batch release certificate" for test analysis report of quality control / quality assurance department, the manufacturers have to be relied upon.

Similarly, based on this situation, most of the public health facilities did not send their samples for quality assurance. The health facilities reported, that they have procured the medicines from prequalified firms or manufacturers, so the document was not required. And if they are required to send the document for DTL, then there will be more delay in availability of the medicines.

**In Punjab:** All the samples of medicines were sent to Drug Testing laboratories. In Punjab, particularly, there were five drug testing laboratories established at divisional level by the department of health; which covers the analytical requirements. The payments of the medicines were only made, when districts or hospitals receive the satisfactory reports from these laboratories.

**In Punjab**, it was witnessed, that despite putting in a lot of efforts in this case, the selection of the brand leaders, development of the new strategies for procurement, efficient follow up for pipe line status of orders, increase in budget to meet the gaps, timely submission of reports from DTL, timely payments to the manufacturer; an unacceptable delay in supplies

was observed due to which health facilities were in very bad shape. So much so that even the CEOs of the companies were expecting that if the manufacturers do not supply the medicine in time, there were high chances that the budget for procurement of the medicines will lapse. The prequalified manufacturer has less manufacturing capacities. During the visits of private pharmacies, in private sector, it was observed that there was no delay in the supplies of same manufacturer (GSK for Amoxicillin suspension). It shows that these brand leaders have more interest in their regular market.

Such attitudes of the manufacturers were also reported from Sindh province.

**Balochistan:** Central procurement system was introduced to ensure the procurement of quality products.

**Note:** It has also been noted that the IHS has been contracted as PPP for RHCs but their budget has not been released due to which the supply of medicines was affected. IHS has made an initial supply from their own budget. This needs to be replenished with the committed budget, for smooth operations of health facilities.

### 4.2.7 Section VII: Inventory Control

The Inventory control or inventory management is heart of pharmaceutical management system. It has been observed that the inventory management was considered as the simplest method, based on the receipt, store and issuance of medicines and record. The inventory control or management was not effective; mainly, due to the lack of pharmaceutical management knowledge or lack of qualified person i.e. pharmacist. One of the outputs of proper inventory management system is to create a reasonable balance between holding cost on the one hand and purchasing and shortage cost on the other. It could be achieved by applying the techniques, like; establishing minimum and maximum stock levels, establishing the reorder levels and determining how much to reorder. Organizing the data in effective manner supports the LMIS.

In Sindh, the inventory management system, used in public health facilities has shown many deficiencies in which push system of supplies was mostly observed. The medicines were distributed, based on the availability and request from HFs, rather than need. Most of the record keeping was manual and even the manual records were not fully updated. The concept and importance of bin cards were not fully understood. In some health facilities, either these bin cards were missing and in some, if available, were not updated. BHU Jaffer e Teyar of District Karachi Malir, stock register was not updated for Amoxicillin suspension. Moreover, the requisition for medicines was submitted with wrong information of physical quantities. In medicines requisition, stock in hand was reported as zero while physically bottles of Amoxicillin suspension were present in the health facility.

In Punjab, minimum stock level of tracer medicines for health facility has been established for the monitoring of MEAs which was considered as stock sufficient for next 45 days. The calculation for the average monthly consumption, was not dealing with all the WHO recommendation; but it helped in improving the availability of the stock in health facilities. The inventory control is required to balance the minimum and maximum stock levels. It was also reported that the excess stock of Amoxicillin suspension was distributed from Muzaffarghar. The e-procurement system, total maximum limit for the district was defined; because if the procurement exceeded the forecasted quantities, it was not possible to manage it with available budgets. In National program, and IRMNCH & NP, the minimum and maximum levels were demarcated. The Specialized healthcare

& Medical Education department has established its own medicines inventory management software, which gives the real time data of the health facilities under its supervision.

The **PPP:** The holding cost was managed by increasing the number of supply; which not only saved the holding and procurement cost but also the distribution or transportation cost. It provided sufficient space to organize the stocks in small store of public health facilities, especially in BHUS.

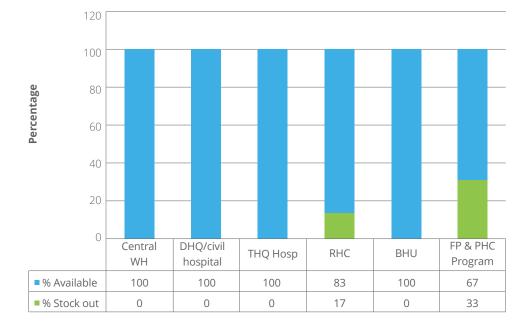
### STOCK AVAILABILITY STATUS AT THE HEALTH FACILITIES DURING ASSESSMENT:

Any health facility that faced even a single day of stock out during one year period was considered as stock out. Even, at the time of assessment, the stocks were available but during one year period health facility faced the condition of stock out was reported under the stock out. It has been observed that the stocks of ORS were comparatively better then Amoxicillin and Zinc Supplementation. Mostly the stock outs were observed with LHW program.

Based on the observations during assessment following percentage of stock availability has been recorded. The total number of sample size was 50 out of which 38 service delivery levels were observed in Sindh and 26 were visited in Punjab. During the discussion with provincial managers of Sindh it was informed that procurement of all medicines were under process and within one month period the stocks will be available at the district levels.

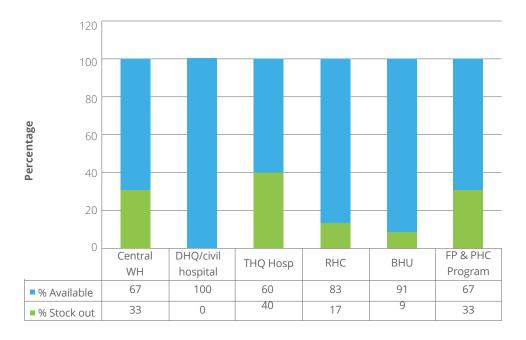
Details are mentioned in graphs below:

GRAPH 6: STOCK OUT STATUS OF ORS IN SELECTED DISTRICTS OF SINDH Stock out status of ORS in Selected Districts of Sindh



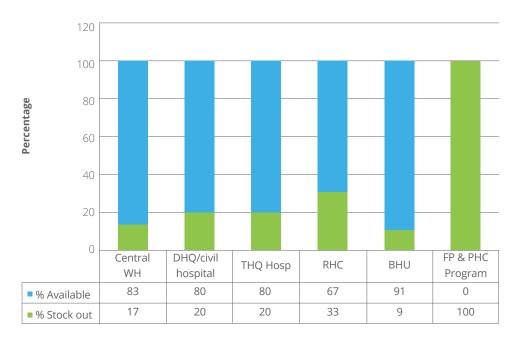
### GRAPH 7: STOCK OUT STATUS OF ZINC SYRUP IN SELECTED DISTRICTS OF SINDH

Stock out status of Zinc Syrup in Selected Districts of Sindh



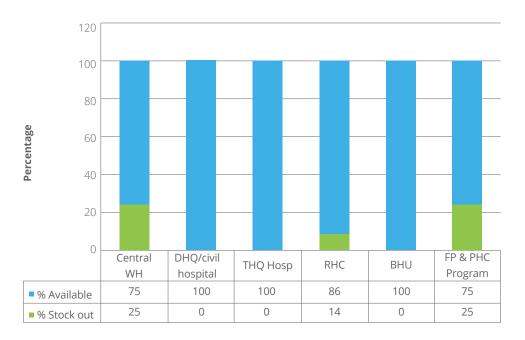
GRAPH 8: STOCK OUT STATUS OF AMOXICILLIN SUSPENSION IN SELECTED DISTRICT OF SINDH

Stock out status of Amoxicillin Suspension in Selected Districts of Sindh



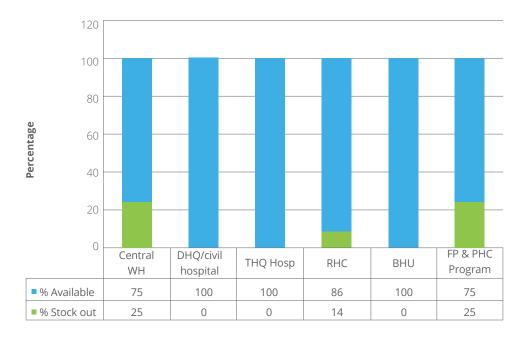
GRAPH 9: STOCK OUT STATUS OF ORS IN SELECTED DISTRICTS OF PUNJAB

Stock out status of Amoxicillin Suspension in Selected Districts of Punjab



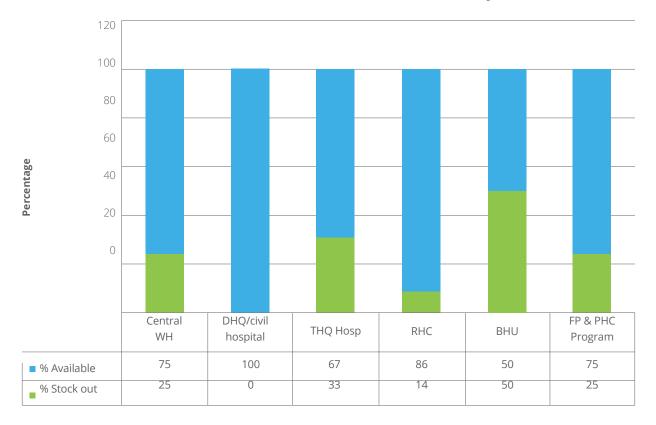
GRAPH 10: STOCK OUT STATUS OF ZINC SUPPLEMENTATION IN SELECTED DISTRICTS OF PUNJAB

Stock out status of Amoxicillin Suspension in Selected Districts of Punjab



GRAPH 11: STOCK OUT STATUS OF AMOXICILLIN SUSPENSION IN PUNJAB





### 4.2.8 Section VIII: Warehousing and Storage

The storage condition of the medicines has great impact on the service delivery. Among the storage conditions, the size of the store or warehouse has great importance. The availability of temperature controlling equipments like fridge and AC for maintaining room temperate, directly affects the efficacy of the products. The availability of racks, pallets, thermometers, fire extinguishers are essential for the storage of medicines.

The storage conditions of public health facilities need improvement. It includes the improved knowledge of the staff and the storage condition etc. Although, the Punjab health departments have improved the storage conditions and equipment like AC, fridge etc. have been provided. Such facilities were only provided at district level while the BHUs or RHC store—also have need of these equipment. Vaccine was stored in recommended conditions. Chillers were provided at district level and ILR were provided at health facility level. Vaccine carrier boxes and ice packs were also provided to ensure the cool chain.

The government of Sindh, has planned to establish one warehouse in each division, to improve the storage capacity of the medicines.

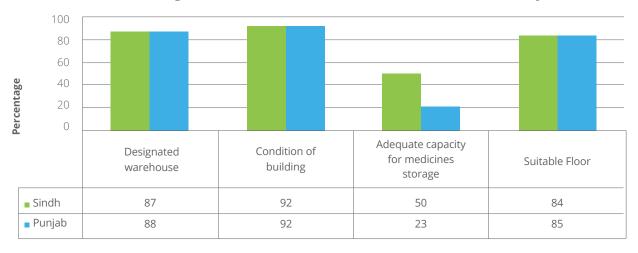
### 4.2.8.1 Infrastructure of warehouses

The medicinal warehouses have been assessed to provide the baseline information of the storage conditions. Purpose built stores were rare, mostly, rooms were allotted as storage sites. Capacity of store rooms, for the health facilities were not enough to store the medicines as per recommended procedures. The structure of medicines store of district Kashmore Sindh and Rajanpur were not suitable to store the medicines. EDO health, LHW program of Kashmore have arranged a temporary store while Rajanpur is still using the same store. The details are as follow:

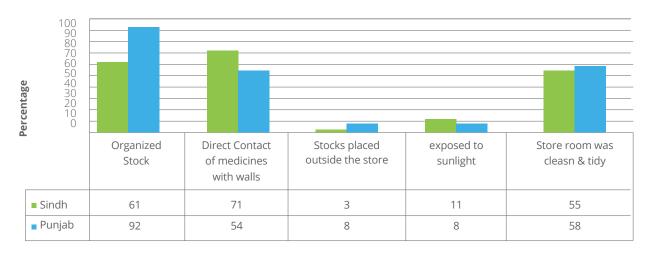
### 4.2.8.2 Good Storage Practices

The good storage practices, mainly depend upon the available resources and knowledge. The availability of a pharmacist for medicines management is a legal requirement. In Punjab, the Pharmacist are available in DHQ and THQ hospitals, where an additional charge has been given to "District Quality Control officer" who is a pharmacist by profession. The post of pharmacist on central warehouse was not filled. In Sindh, this responsibility is given to DDO or any doctor who is MBBS by profession. The details of good storage practices are as follows,

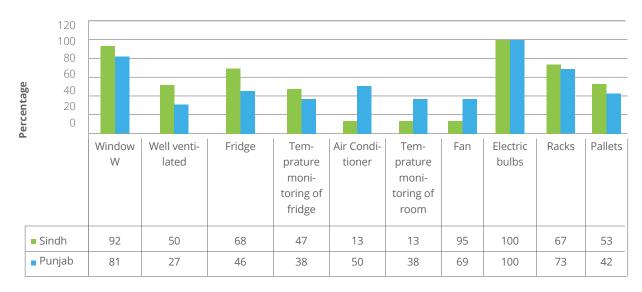
### Status of Storage Infrastructure in selected districts of Sindh and Punjab



### Stock Handling in selected Districts of Sindh and Punjab



### Storage practices in selected Districts of Sindh and Punjab



### 4.2.9 Section IX: Transportation / Distribution

In Punjab and Sindh, It has been observed, that in the public health department, Supply chain mechanism and transportation of medicines was a challenge. Although, the health department, either arranges vehicle from LHW programs or provides rental vehicles for the transportation of medicines; but such situation could not be handled when there is an emergency stock delivery. The overall expense for the distribution of medicines increased considerably. The techniques to calculate the quantities, that are required to be distributed, were not understood by the store keepers. The quantities of medicines should be calculated on the basis of morbidity to provide complete therapy of a disease. It was observed that the health facilities have ORS in the stock, but Zinc Syrup was not present and if it was available, the quantities were very low. It indicates that morbidity or STG were not taken in considerations before the distribution of medicines. The distribution of vaccine was through recommended vehicle and vaccine carrier boxes.

In Sindh, PPP has arranged the private suppliers. They were responsible to deliver the medicines at district levels. At the district level, the organization managed medicines supplies from the district warehouse to the health facilities. The frequency of medicines supplies was based on the consumption and availability of space for storage, at each level. In the districts, the lead time of supply in PPHI was 2 to 3 days. PPHI, HANDS and IHS have its own vehicles (not specifically designed for medicines transportation) and medicines were distributed in the vehicle; especially, in the districts there were no specific routes for the distribution of medicines.

In Punjab, IRMNCH & NP has solved this issue by contracting a courier service for the supply of medicines. It was reported by the LHWs, that in the past they had to face the issues of medicines delivery. Delay was a common practice. The transportation of medicines through courier has reduced the time of delivery; thus, the medicines will reach its destination in time.

### 4.2.10 Section X: Organizational support for Logistics system

The organizational support for the logistics activity is an important component for smooth operations of supply chain management system. It was observed, that the communication system among the public health facilities at the district levels was either weak or ambiguous. There were no routine meetings of the logistics staff. Mostly, the communication is through

the submission of reports and/or feedbacks. There was no capacity building of staff to develop the skills for better and more effective supervisory visits. The supervisors have an empathic behavior toward the departmental negligence. During health department's supervisors (DHO, coordinators etc.) visits, the coaching of health facility staff should be arranged. Such frequent coaching should be obligatory because it may help the on-job staff to develop the skills required for their employment.

In Punjab, monitoring of the stock out status was reported by two systems; one was DHIS and second was MEAs. Health department has more trust on MEAs data. The process of medicines forecasting was introduced in e-procurement software which was accessible at regional level. During the medicines procurement meetings at secretory health office, the demands of districts and health facilities were refined, rationalized and submitted to the manufacturers. The argument of health facilities staff, that they receive less quantity of medicines was still not denied. .

In Sindh, The Public health facilities lacked a well-defined system of medicines forecasting. It lead to irrational demand of medicines, and a common argument made by health facility staff was, that they do not receive the quantity of medicines according to their requisitions. Such issues were raised by the health facility staff during the supervisor's visits.

Conversely, the health facilities under the supervision of PPP, did receive the medicines according to their submitted demand. In the public and private partners, the health facilities did regular visits of higher levels, in which Hand on trainings / on job coaching has been done.

### 4.2.11 Section XI: Product use

All out efforts were made to improve the system, which ultimately, lead to the improvement of the availability of right drug, at right time in right dosage and frequency. Irrational prescribing practices of the physicians may influence the whole efforts that were put in to improve the SCMS.

The WHO always recommends and promotes the rational utilization of the drugs. In SCM, efforts made to promote the rational utilization of drugs are very important. There is a requirement to ensure the availability of STG at the service delivery site, to promote the understanding of STG, and increase the rational use of drugs. During the assessments, it has been observed that one of the major reasons of irrational use of medicines was, the unavailability of first line therapy. Physician has to move on to the second line therapy. It may increase the antibiotics resistance and the cost of therapy.

### 4.2.12 Section XII: Patient Exit interviews

Total number of caretakers interview conducted were 73. It has been observed that the patients have the understanding of preparation of ORS and on further inquiring an impression was given that they know the preparation of ORS before coming to hospital. The Patients know that they have to prepare the medicines in boiled and cooled water while a small number of patients skipped the word cool. The dose and duration was also understood by the patients, although, some patient have the confusion of daily interval of the administration of medicines.

District	Number of caretakers of patients interviewed	% of patient with correct understanding of	
		preparation of medicines	correct dose and duration
Kashmore	11	91	82
Sukkur	10	90	90
Tando Muhammad Khan	8	88	88
Karachi Malir	7	86	86
Saheed Benazirabad	11	91	91
Muzaffarghar	8	88	88
Rajanpur	8	88	88
Pakpattan	10	90	90

### 4.2.13 Section XIII: Private clinics and pharmacies

Prescribing practices (as asked from the physicians) was poly pharmacy. Physicians need complete understanding of the use of Zinc. There is no proper method defined for the disposal of clinic / hospital waste. It has been observed that the Zinc dispersible tablet was available in the market of District Pakpattan and Karachi. There was no shortage of medicines in the market especially in Punjab but there was a delay from the manufacturers in supply which indicates that the open market was the first priority area of the manufacturers.



## CONCLUSION

## 05 CONCLUSION

- 1. The health system of Pakistan is now devolved. The supply chain system of medicines is totally provincial subject. It was observed that overall the public health supply chain system in Pakistan was predominantly mixture of "push" and "pull" system. But in case of unavailability of demanded medicines it becomes "Push" system.
- 2. Successful development and implementation of inventory management software will facilitate the LMIS and the barriers in report submission could be resolved. It will lead to better healthcare service delivery and access to medicine. In Punjab, prescription management information system, linked with LMIS is likely to produce more information for analysis including prescription behavior.
- 3. Many online links are required to develop LMIS and DHIS integration. In DHIS reports quantities of tracer medicines were not shared. On the other hand, DoH does not have web based / computerized inventory management system. As a result, different master sheets with different SoPs may create difficulties in synchronizing the data, particularly in converting it to useful information.
- 4. The medicines forecasting and quantification should be based on the WHO recommendations to minimize the stock-outs. The gap of availability of tracer medicines should be covered.
- 5. The capacity of medicines stores at health facility level are enough for medicines supplies. The staff members who were handling the pharmaceuticals were not capable enough to understand and implement the WHO recommendations. Pharmacists were not frequently available for handling the medicines as per WHO recommendations.
- 6. The distribution of medicines from district warehouse to health facilities were not based on any forecast criteria. Medicines were not distributed in the form of therapies / courses / kits rather unjustified proportions of medicines were distributed. Department of health do not have suitable vehicles for pharmaceutical transportation which creates hurdle in distribution plans.
- 7. The process of prequalification of manufacturers was not up to the mark. It does not accurately judge the production capacity of manufacturer due to which medicines were not supplied within the duration of sixty day time period. The delayed supplies, thus, exerts an extra burden on medicines SCMS.



## LESSONS LEARNED

# 06 LESSONS LEARNED

The lessons learned from the study are as follows

- 1. Department of health and vertical programs have their own logistics management information systems which were designed according to their needs. The process of integration of LMIS with revised DHIS will be a challenging activity which require continuous technical and financial support.
- 2. The process of registration of new generic or formulation with DRAP is time taking process. The national pharmaceutical manufacturers are least interested in production of medicines whose market is not developed.
- 3. Supply chain activities are interdependent with each other. Performance of one activity affects the others.



### RECOMMENDATIONS

## 07

### RECOMMENDATIONS

### 7.1.1 Immediate Recommendations

- 1. The health facilities should be provided a computerized / android LMIS, for inventory of tracer elements on immediate basis. The data should be compiled on daily basis. The inventory software should be capable to provide an automated stock out reports, expiry calendar, medicines forecasting, distribution and reorders.
- 2. Based on the morbidity data and stock out reports, the medicines forecasting should use mix method to compare consumption method with morbidity method. Apart from that, the members of the procurement committee, physicians; with strong clinical knowledge and Hospital pharmacist should also be included for data collection and decisions.
- 3. Immediate steps should be taken for strengthening of DTL of Sindh; for quality assurance of medicines procured for public health facilities.
- 4. The basic technology and support process for integration of LMIS with revised DHIS should be planned and designed. It should be aligned with continuous financial and technical support for implementation and maintenance. The plan should comprehend data mapping, system synchronization, software updates and customization. It should address other system disruption and stakeholder's communication. The WHO definitions of "opening stock balance", "stock out" and "stock on hand" should be used to create harmony and synchronization of LMIS with revised DHIS.
- 5. As an interim measure, a master list of health facilities, commodities etc. of partners, stakeholder and others who support the cause for Diarrhea and Pneumonia should be shared and synchronized till the interoperability layer can be added.
- 6. Based on WHO recommendations, Zinc DT should be used instead of Zinc syrup for the treatment of Diarrhea. WHO recommendations should be followed, in LHW kits, Zinc syrup should be replaced with Zinc DT; along with easy handling of kit, and accuracy of dose will also be increased. It will help to reduce the transportation cost. The stock levels and consumption of Zinc supplement and Amoxicillin suspension should be monitored by LHW program LMIS.
- 7. The distribution of medicine should be in the form of complete courses or Kits so that the STG should be followed. Medicines transportation system should be outsourced to companies like IRMNCH & NP in Punjab.



### 7.1.2 Medium term Recommendations

- 1. The integration process should be launched in the meeting with the stakeholders and should continue to have the follow up meetings on regular basis in order to share the updates. Memorandum of Understanding should be developed among stakeholders for daily data-sharing interface between LMIS and revised DHIS. Stakeholders should be engaged with diverse expertise of clinical health practitioner, pharmacist and statistician representing all the level of health system to develop a knowledge base and make it available on the dashboard.
- 2. During the consultation with the stakeholders, key performance indicators should be finalized and should be regularly monitored. This can be more helpful for further investigation and integration.
- In integrated LMIS and DHIS, STG should be incorporated to develop an automated morbidity based method for medicines forecasting.
- 4. The process of registration of Amoxicillin DT and Copackaging of Lo-ORS and Zinc DT with DRAP should consider the helpful provision of law; as stated in 2. (v) and 2. (ix). The minutes of 265th meeting of Registration Board case no. 3 i.e. registration of 7.1% chlorhexidine digluconate gel. On submission of satisfactory documents by the firm 7.1% Chlorhexidine digluconate gel has been registered. United States Pharmacopeia (Pakistan) should be involved in the process of registration. It will be helpful for the firm to achieve GMP standards and submission of required stability studies.

### 7.1.3 Long term Recommendations

1. The software like "Prescription management Information System" has advantages over inventory management system but it should be modified and upgraded to computerized physician order entry software (CPOES) approach. Such software can inform the physician while prescribing medicines about the safety of medicine during pregnancy or lactation, therapeutic dose, drug allergy, side effects, drug-drug interaction, drug-food interaction etc. Adverse Drug Reactions Reports should also be included in it.

- 2. At DHQs and THQs, the availability of pharmacist showed better SCMS. Considering the number of outpatients or services delivered from RHC, Pharmacist should be provided to look after the pharmaceutical activities and facilitate the nearby BHUs.
- 3. The capacity of warehouses should be improved by purpose built warehouses or by providing racks suitable for large warehouse. Technical knowledge based on WHO recommendations of "Good Storage Practices" should be given to the warehouse staff for the handling of medicines.



### **ANNEXURES**

### **ANNEX 1: DESK REVIEW**

World ealth organization define logistics has developed from an art of supply and maintenance in to scientific discipline involving the utilization management principles. Logistics for peripheral health facility as provision of activities including planning, budgeting, receiving and inspection, storage, inventory control, supply, distribution and transport, maintenance and repair, communications, environmental management of health facilities, record and reporting, supervision and logistics training [4].

WHO estimates that in Low and middle income countries on an average there is about 35% in public health facilities and 65% in private sector, stated in Millennium Development Goals 2008. In LMIC where the buying power of medicines is very less which creates a barrier in access to essential medicines which led them to private informal sector of medicines especially in rural areas. It has also observed that inappropriate prescription and dispensing of medicines also prevails which also led to the gaps is access of essential medicines [5].

World Health Organization described that one of the key component of the functioning of health system is provision of access to affordable, appropriate and high quality medicines. The access of essential medicines is the outcome of integration of finance, planning, service delivery, and information management and governance system [6].

Pakistan's National Essential Medicines list has been prepared based on the WHO essential medicines list. EDL first version was published in 1995 and subsequently reviewed in 2000, 2003, and 2007 and now latest version has been published in 2016. It consists of 415 total molecules. 23 medicines were added as supplementary medicines which are based on the expert technical group recommendations to provide the wider range of medicines to meet the urgent needs. Selection of essential medicines for the Procurement is based upon the NEML 2016, for conveniences the list of EM has been arranged according to service delivery levels [7].

The access of essential medicines in public health facilities is of the major challenges [8]. The Generic Drug Act was introduced in 1972 to improve the access of essential medicines but it was opposed by the commercial sector [9]. The Drug Act 1976 currently regulates the pharmaceutical sector and is a comprehensive document setting out extensive stipulations for industry licensing, drug registration, quality control etc. However implementation of the act is loosely monitored and creates space for abuse [8]. Due to the weakness of the drug act malpractices of distribution chains has been observed [9] and it is also described in Pakistan Medical and Dental Council 2011 report that due to the absence of the drug act for the promotion of the medicines to the prescriber and its implementation. Receiving of gifts and benefits were not well covered. It has promoted the irrational use of medicines the procurement list of the public sector in Punjab is a Generic list which promotes the healthy competition in commercial sector.

The healthcare department of Punjab has been divided into two departments that is Primary and Secondary Healthcare Department (P&SHD) and Specialized Healthcare and Medical Education Department. P&SHD is responsible for vertical programs and health facilities including DHQ, THQ, RHC hospitals, BHUs and dispensaries. In principal for the procurement of selected essential medicines for the districts DGHS strictly followed the PPRA rules. District Government Punjab authorized the concern Health Department for the procurement of the selected medicines for DHQ, THQ, RHC and BHUs in Punjab and Additional Director Health Services (MS&DC) submitted their demand to DGHS which then advertised the invitation for bids in the Newspaper. DGHS on receiving the prequalification documents select analyze it and select the firm for bids. Than DGHS issued the notification of award/advance acceptance of tender (AAT) and subsequently contract and purchase order against the finalized rates by Health Department after the receipt of performance security in the form of an irrevocable bank guarantee. The upper limit of the ordered quantities should not exceed the demand submitted by DGHS and subsequently advertised in the bidding documents. On receiving the stock DGHS after confirmation of quantities and quality distribute the stocks in districts. The procedures strictly followed the PPRA rules; it is required to see in-depth situation analysis for the selection of medicines for the treatment of diseases, method of forecasting of demand and methodology of distribution of items. In districts purchase committee also exist which also follow the PPRA

rules for the purchase of medicines. The in-depth situation analysis is required to see the policies and regulations for the selection, procurement and distribution of essential medicines at provincial and district levels.

Specialized healthcare and Medical education department has also launched web-based medicines inventory management software which is temporarily share with the hospitals for learning purposes and instruction has been given for the entry of the medicines of local purchase (LP) of each tertiary care hospital at Lahore. Software is of basic level having "Medicines Dashboard" which gives quick access to near expiry medicines. The "Medicines Management" field keeps the inventory record of the medicines batch and expiry wise. It also facilitates the hospitals for transfer of stock from one hospital to another.

Health system of Pakistan provides care to children suffered from diarrhea and pneumonia also through Lady Health workers and Lady Health supervisors (LHS) programs. Even in presence of these services diarrhea and pneumonia causes 27% of all deaths in children under five in Pakistan. In project "Nigraan" a qualitative study has been conducted to explore the role of LHW's and LHS's motivation level in District Badin of Sind province of Pakistan and also to assessed the knowledge and skills regarding iCCM of diarrhea and pneumonia. It has been observed that there was lack of knowledge of diarrhea and pneumonia case management in which lack of knowledge to prepare the ORS was also reported. LHW has also reported that lack of availability of essential medicines and commodities for diarrhea and pneumonia case management is the major reason of their demotivation. They also mentioned that availability of essential medicines will improve their credibility in the community. Medicines management required effective inventory management reporting for the replenishment of the medicines. Feedback provided by the LHWs showed that they were not comfortable with written reports which may be cause hindrance in stock reporting. [10]

According to Multiple Indicator Cluster Survey (MICS) 2014 Sindh described that in diarrhea management many deaths can be prevented by use of ORS or recommended home fluid (RHF) and Zinc Supplementation reduces the reoccurrence of episodes. It has been reported that the overall period-prevalence of diarrhea in children under five years of age is 28.4% while the highest period-prevalence is seen among the children age 12 to 23 months which grossly correspond to weaning period. The care seeking behavior for diarrhea was more common for younger as compare to older children. 72.8% of children age 0-11 months received the treatment from HF compared with 62.6% of children age 48-59 months. Survey report stated that Children under five who received ORS were 54.5% while who received both ORS or RHF and Zinc were 11.6%. In Sindh 14% of children suffered from diarrhea do not received any treatment of diarrhea (MICS 2014, Sindh).

Punjab Public Health Sector Strategy (PPHSS) 2012-2020 stated that the public health facilities of Punjab have issues in supply chain, lack of quantification skills, procurement and budget issues, lack of storage spaces and delay supplies which results in frequent stock outs of essential medicines health facilities. The strategy has sets its goals to make sure that there must be periodic review of Essential Drug List (EDL) and system of essential medicines supplies should be improve at the level that there must be not stock out at BHU, RHC and SHC hospitals. Key performance indicators were also set for the inclusion of Zinc and pediatric formulation of amoxicillin in essential drug list of LHWs.

The use of ORS and Zinc Supplementation was well accepted for the reduction of use of antibiotics. The interventions such as diarrhea pack through community health workers in community settings. The effectiveness of the provision of the diarrhea pack has been reported as effective that it should be scaled up at national level. [11] The study of Akbar Pardhan described that the Matiari district has sound implementation potential; however, bottlenecks at health care facility and at health care management level have badly constrained the implementation process. An interdependency exists among the constraining factors, such as lack of sound planning resulting in unclear understanding of the strategy; leading to ambiguous roles and responsibilities among stakeholders which manifest as inadequate availability of supplies and drugs at PHC facilities. Addressing these barriers is likely to have a cumulative effect on facilitating IMCI implementation. On the basis of these findings, we recommend that the provincial department of health and provincial Maternal Neonatal and Child Health (MNCH) program jointly assess the situation and streamline IMCI implementation in the district through sound planning, training, supervision, and logistic support. [12] "The Institutional Assessment of UNICEF Supply Division's Forecasting

Process" described in its final report that the demand planning plays a critical role in ensuring that supplies reach the right place, at the right time, in the right quantity and at the right price. Mostly used forecasting procedures are the demand from the government (government request) which comes in the form of bulk orders which stretched the supply chain system. According to the UNICEF report the forecasting of medicines become important component to manage the smooth supply chain operations. The forecasting at government level should be with sufficient timelines to support other SCM operations.

The USAID funded Deliver Project "Supply Chain Evolution" described the framework of the Supply Chain Strengthening of Developing countries Public Health Sector. The project report described that the development and improvement in the supply chain management system of the public sector of developing country it is necessary to describe the existing level of the supply chain management system which ranges from "ad hoc level" to "extended level". In extended level of supply chain management system the extended stages, health system managers increasingly understand how their system operates, ways to use resources more efficiently, how to manage and align supply chain actors to achieve common goals, and, ultimately, ways to interact more effectively with the broader environment in which the supply chain is situated.

In Pakistan there is considerable work has been done for the policy legislation and regulation of medicines. Access of medicines is included the policy and regulation but still there are gaps that exist in policy and practices. These gaps are due to weak implementation and lack of monitoring procedures. It has also observed that one of the reasons of the lack of implementation on the policies is government traditional tilt of policies towards punitive actions rather than cooption of other stakeholders towards practitioner's regulation [8] and it has also been observed in the recent drug act given by the Punjab government.

In pharmaceutical market of Pakistan commercial sector is considered as more active in terms of drug information rather than public sectors. It has been observed that on request of the doctors about the drug information from mix of 45 multinational and local companies only 26% letters has been received out of which only 15% met the WHO criteria for optimal drug information center [hafeez and mirza 1999].

The reporting mechanism of Adverse Drug Reactions (ADR) is considerably week. There are many parameters due to which the reporting of the ARD is not sufficient to support promote the drug information. Even in some studies it has been observed that the medical professionals are not well aware of the term or if aware were not know the process of reporting the ADR.

A cross sectional study conducted to identify the influences of the availability of essential medicines for the community management childhood illness in Central Ugrnada has mentioned that the uninterrupted supply of medicines to treat children <5 years with pneumonia, diarrhea and malaria depends on the timely submission of the reports showing the utilization of medicines for the purpose of the replenishment. Innovative ways of monitoring of the stock levels may improve the monitoring and availability of medicines which is an important factor for the community health workers to manage the pneumonia and diarrhea. [13]

In achieving the Millennium Development Goals of UN lack of educated staff is one of the major barriers. The lack of pharmacist is one of the reason to achieve the goals of medicines supply chain management. MSC not under the supervision of pharmacist or even the person having required pharmacy knowledge has caused hurdles in operations of smooth supply chain management of medicines. The training of health personal on essential medicines supply chain management should be done to improve the availability of medicines. [14]

Maintaining of adequate supply of essential medicines at the health facility level is the backbone of the success of management of any particular disease. Maintaining the stock level in the health facility is a challenging task. An innovative idea to monitor the stock and timely and effectively reporting system contributes a lot to support the disease management. A pilot project for the improvement of the essential medicines supplies for the malaria has introduces the mobile text reporting system, named "SMS for life" has worked well to improve the availability of medicines for malaria in health facility. The study reports that good visibility of the stock level's reports submitted timely has the major factor to reduce the stock-out conditions in the health facility [15]

Health system delivery systems like, Philippines, constantly challenged by the disasters and emergencies where existing laws, national policies and regulations covers critical aspects of medicines management including

quantification, warehousing, distribution, utilization monitoring and disposal of medicines even then due the lacking of the implementation is a hurdle in supply chain management of medicines. The additional supplies of medicines during the disasters increased the intensity of mismanagement [16]. Increasing the quantities of the medicines in the weak supply chain management of the medicines creates more SCM issues. It is necessary to improve the SCM hurdles and bottle necks for the batter access of medicines for patients in the health facilities.

The Integrated Management of Childhood Illness (IMCI) was developed by the WHO and UNICEF aimed to reduce childhood morbidity and mortality. In Tanzania it was introduces in 1996 and then expend to all districts of the country. The cross-sectional study with sample size of 95 healthcare workers described the improvement in the essential medicines supplies and monitoring of utilization has played a vital role in implementation of IMCI services [17]. It is necessary not only to improve the quantities of medicines but also the monitoring of rational utilization. Government of Punjab and Sindh has made many efforts to improve the access of medicines for patients, it is necessary to analyze the rational utilization of medicines.

Access to medicines from health system perspective was studied by Alliance for Health Policy and System Research, World Health Organization. The study sates that the most health system strengthening interventions ignore the interconnections between system components specially the complex relationships between the essential medicines and health financing, HR, Health Information and health service delivery were not given sufficient considerations. Findings of the study recommend that the accesses to medicines barriers are complex and interconnected as they occur at multiple levels of health system. A holistic view of demand side constrains with multiple and dynamic relationship between medicines and other health system resources should be applied. It has mentioned that the determinants of access to medicines are in national, regional and international contexts. [18] The objectives of the consultancy will cover the aspects of National, Provincial, District and Sub-district levels of medicines supply chain management. The indicators used for the monitoring covers the interconnections of the SCMS.

The irrational or non-scientific forecasting and quantification of essential medicines leads to loss of medicines by over stocking or expiry or on other hand causes the stock out. This situation has described by the study conducted in 2014 in Tanzania. It stated that the integrated logistic system was not adequately addressed accountability concerns under the "push" or kit system. The weaknesses of the quantification have led the frequent stock out of antimalarial medicines and ORS. The study proposed the regular reconciliation between the health information system and the medicines delivery system which not only improve the availability of essential medicines but also guide for the interventions for further improvement of access of essential medicines. [19]

Most common method of medicines forecasting is consumption based which is also used public health facilities of Pakistan. To improve the access of medicines the consumption based methodology should be applied with its all technical aspects. Technical Resource Facility plus (TRF+) has conducted the developed the user friendly tool for medicines forecasting and quantification and training for 36 districts of Punjab has been conducted in which DDO, Pharmacist and computer operators were trained. Later Primary and Secondary Health Care Department of Government of Punjab has introduces its computerized logistic management information system and claim that system has ability to forecast medicines. In-depth situation analysis is required to see the efficiency of the forecasting and quantification.

The supplies of essential medicines under the supervision of pharmacist have shown better results. The access of medicines has been improved at rural hospitals of Australia. [20]

According to "Bureau of Statics of Pakistan" about 22% population of Pakistan use Public health facilities to get health services. The high competencies of the services provided and the availability of essential medicines at health facilities played an important role in the utilization of health services and the as well as to promote the better clinical outcomes. [21]

The SDG 3 presented by UN emphasizes the need of access of quality treatment within the affordable cost. The price of medicines is one of the interventions to control the cost of the treatment. In Pakistan, the prices of hundreds of essential and life-saving medicines have increased greatly, making them unaffordable to residents with low and middle incomes. [22]

### **ANNEX 2: FINDINGS**

## .1 Section I: Policy, Legislation and Regulation

FATA				Act, 1976(XXXI of as a donation by 3 of said act, for a	is. It also depends the registration of	ncy in Pakistan, is rugs/Registration) 15." ed 13.05.2010, for with effect from
Khyber Pakhtunkhwa		No, the National drug policy has not clarified the guidelines for donation of the products.	pharmaceuticals.	Yes, the medicines for donation are exempted from duty and taxes. According to the Gazette notification SRO 586(1)/2015. In the exercise of powers, conferred by the section 36. of Drug Act, 1976(XXXI of 1976), Federal Government has exempted the duties and taxes on any drug imported as a donation by any agency from provision of sub-clause (vii) of clause (a) of subsection (1) of section 23 of said act, for a period of one year with effect from 16 <sup>th</sup> April 2015.	Registration of drug with DRAP is based on the public interest, safety and efficacy guidelines. It also depends on the manufacturing capability of manufacturer who was submitting the documents for the registration of product.	According to Gazette Notification "Any drug to be imported as donation by any agency in Pakistan, is conditionally exempted from section 23(1)(a)(vii) (Import, manufacture and sale of drugs/Registration) for a period of 1 year with effect from 16.04.2015 vide SRO. 586 (I)/2015 dated 12.06.2015."  Such exemption was notified earlier for a period of 5 years vide SRO. 334 (I)/2010 dated 13.05.2010, for 5 years i.e. 16.04.2005 vide SRO. 439 (I)/2005 dated 12.05.2005 and for 5 years with effect from 15.04.2000 was notified vide SRO. 260 (I)/2000 dated 08.05.2000.
Baluchistan	y document.	ed the guidelines for d	on finished good of the	rempted from duty and powers, conferred by pted the duties and tase (vii) of clause (a) of the April 2015.	n the public interest, s. acturer who was subn	ny drug to be importe 23(1)(a)(vii) (import, r 16.04.2015 vide SRO. 5 or a period of 5 years v 39 (i)/2005 dated 12. (i)/2000 dated 08.05.2
Punjab	Yes, there is a Pakistan National Drug Policy document.	ug policy has not clarifi	No, the duties and taxes are not imposed on finished good of the pharmaceuticals.	Yes, the medicines for donation are exempted fron SRO 586(1)/2015. In the exercise of powers, con 1976), Federal Government has exempted the dut any agency from provision of sub-clause (vii) of cla period of one year with effect from 16 <sup>th</sup> April 2015.	; with DRAP is based or ng capability of manuf	According to Gazette Notification "Any drug to be imported as conditionally exempted from section 23(1)(a)(vii) (Import, manu for a period of 1 year with effect from 16.04.2015 vide SRO. 586 (I Such exemption was notified earlier for a period of 5 years vide 5 years i.e. 16.04.2005 vide SRO. 439 (I)/2005 dated 12.05.2015.04.2000 was notified vide SRO. 260 (I)/2000 dated 08.05.2000.
Sindh	Yes, there is a Pakis	No, the National dru	No, the duties and t	Yes, the medicir SRO 586(1)/201 1976), Federal of any agency fron period of one ye	Registration of drug on the manufacturi product.	<ul> <li>According to Gi conditionally exponding experience of 1</li> <li>Such exemption 5 years i.e. 16</li> <li>15.04.2000 was</li> </ul>
Marks						11
Indicators	Is there National drug Policy document	Does the national drug policy contain the written guidelines for donation of the products?	Is duty taxes imposed on imported drugs or products	Are donated commodities exempted from duty taxes	How new product or formulation get registered?	Are there laws and regulations that promote the importation or local production of the health commodities being assessed? If yes, give examples.
	1	2	c	4	5	9

	Indicators	Marks	Sindh	Punjab	Baluchistan	Khyber Pakhtunkhwa	FATA
		1	The notification	is such as [including SF	(I)/95 dated 19	he notifications such as [including SRO. 330 (I)/95 dated 19.04.1995, SRO. 218 (I)/90 dated 04.02.1990,	dated 04.02.1990,
			SRO. 1124 (I)/84	l dated 20.12.1984 (eac	th of 5 years' exemption	RO. 1124 (I)/84 dated 20.12.1984 (each of 5 years' exemption) was provided on Clientele demand.	ele demand.
			<ul> <li>Drug Act 1976,</li> </ul>	Chapter 4 "Administra	ation and Enforcement	Drug Act 1976, Chapter 4 "Administration and Enforcement" described "regulation and prohibition of	ınd prohibition of
			import etc. of d	rugs" point number 2.b	states that the drug o	import etc. of drugs" point number 2.b states that the drug or a class of drug specified in the notification	in the notification
			shall not be imp	shall not be import except by an agency of the Government so specified	y of the Government sc	specified.	
7	Are there laws and regulations	1	<ul> <li>Drug Act 1976,</li> </ul>	Chapter 4 "Administra	ation and Enforcement	Drug Act 1976, Chapter 4 "Administration and Enforcement" described "regulation and prohibition of	nd prohibition of
	that hinder the importation or local production of the health		import etc. of d	rugs". According to this	s drug act, only such	import etc. of drugs". According to this drug act, only such drug shall be imported which are on sale in	ich are on sale in
	commodities being assessed?		the market of ar	۱۷ of the Western Euro	pean countries, USA, Ja	ıe market of any of the Western European countries, USA, Japan, Australia, or any other country as may	er country as may
			be prescribed.				
			Production of A	moxicillin DT and Comb	o pack of ORS plus zinc	Production of Amoxicillin DT and Combo pack of ORS plus zinc syrup has regulatory issues of production.	es of production.
∞	Are there policies or other	1					
	restrictions that limit or encourage client access to		Provincial health str	ategies encourage the o	client access to services	Provincial health strategies encourage the client access to services and commodity availability.	ty.
	services or commodities?						
	Ifmo, akipao aquestion al 9.a		The indicator is rela	ted to the Drug Regulat	or Authority of Pakista	The indicator is related to the Drug Regulator Authority of Pakistan and laws are implemented to all, so equal	ed to all, so equal
			weightage is given to all.	o all.			
6	How are policymakers engaged in		By improving the a	vailability of medicine	s at health facilities (i	proving the availability of medicines at health facilities (in all provinces) particularly, in Punjab, to	rly, in Punjab, to
	Improving access to health commodities?		inform the public th	rough TV and Print Me	dia. They should be int	inform the public through TV and Print Media. They should be informed about the availability of free of cost	lity of free of cost
			high quality medicin	es at public health facil	lities. <b>Sindh</b> governmeı	high quality medicines at public health facilities. <b>Sindh</b> government, has focused on improving the supplies of	ng the supplies of
			medicines and they	had planned to establis	sh one warehouse in ea	medicines and they had planned to establish one warehouse in each division to ensure continuous supplies.	inuous supplies.

Indicators	Marks	Sindh	Punjab	Baluchistan	Khyber Pakhtunkhwa	FATA
		In Baluchistan, the	procurement of qualit	y medicines has been	focused. This goal was	In Baluchistan, the procurement of quality medicines has been focused. This goal was achieved by infiltration of spurious
		drugs. The process v	vas strictly monitored;	and information of arı	resting the culprits has be	drugs. The process was strictly monitored; and information of arresting the culprits has been shared in the papers, to build the
		confidence of public.				
		The efforts to put m	ore medicines in the su	upply system at provin	to put more medicines in the supply system at provincial level are as follows	
		Punjab: The primar	primary and secondary healthcare process,		nigh quality medicines pr	a high quality medicines procurement was major focus. The
		budgetary gap crea	ated, due to varied	prices of previous m	anufacturers and curren	gap created, due to varied prices of previous manufacturers and currently manufacturers was filled. The
		temperature contro	lling system of the wa	arehouses was upgrac	led, although, a lot of wα	e controlling system of the warehouses was upgraded, although, a lot of work is still required to maintain the
		standard. The supp	ly process of IRMNCH	& NP has improved. T	he morbidity of the hospit	The supply process of IRMNCH & NP has improved. The morbidity of the hospitals were considered. The allocation
		of the budget for m	edicines procurement	is accurately provisior	ned. DHQ & THQs, howe	of the budget for medicines procurement is accurately provisioned. DHQ & THQs, however, were still not satisfied with the
		distribution of the b	oudgets. Improvement	is observed in LMIS,	prescription management	of the budgets. Improvement is observed in LMIS, prescription management information system, introduced by
		Health Information	and Service Delivery Ur	nit (HISDU) though com	nputerized software in spe	Health Information and Service Delivery Unit (HISDU) though computerized software in specialized healthcare department.
		KP: The medicines fo	orecasting and quantifi	ication was focused, ar	nd the strengthening of su	dicines forecasting and quantification was focused, and the strengthening of supply chain management system was
		done through the staffing of logistics.	affing of logistics.			
		Baluchistan: In orde	or to ensure the procur	ement of quality med	icine, government of Balu	Baluchistan: In order to ensure the procurement of quality medicine, government of Baluchistan, has procured the medicines
		centrally. These med	centrally. These medicines, were later supplied to PPHI.	olied to PPHI.		
		FATA: as per the in	iformation shared, tha	ıt, FATA agencies nee	d strengthening and capa	er the information shared, that, FATA agencies need strengthening and capacity building in terms of access to
		medicines. The depa	artment has requestec	I UNICEF, to extend it	s services in FATA, in terr	The department has requested UNICEF, to extend its services in FATA, in terms of provisioning of medicines and
		capacity building				

### 1.2 Section II: Product Selection

	ATA	>	RTI,	>	>	>				
	КЬ	<b>\</b>	T and of hea	>	>	>-				
	Baluchistan	<b>\</b>	n of ST levels	>	>	>	i.			
	DHŒ	<b>\</b>	Care, Inter-natal care, Prevention of STI and RTI, eening, outreach services for all levels of health	>	>	>	burde	tan.		ces
	ВМИСН & ИР	>	are, Pre ervices	>	>	>	disease	of Pakis		l provir
Punjab	Rajanpur	٨	tal ca	>	>	>	si h	rity o	ges	in al
<u>-</u>	bakpattan	٨	ir-nai utrea	<b>&gt;</b>	>	>	whic	utho	oacka	t list
	Bahawalnagar	<b>\</b>	, Inte ng, o	>	>	>	lines	or A	alth p	ıtrac
	Muzaffarghar	>	Care	>	>	>	uide	gulat	or he	ie coi
	рно	γ	stnatal alth, scr ties	>	>	>	жно в	Drug Re	cines fc	ntral rai
	mergor9 lenoiteM	Y	nd postna tal health, facilities	٨	>	٨	ling to	ite of I	l medi	of Cer
	Shaheed Bedariranad	γ	The services are Immunization, Antenatal , Natal and postnatal Care, Inter-natal care, Prevention of STI and RTI FP service, Major Micronutrient deficiencies, mental health, screening, outreach services for all levels of health facilities	>	>	>	ria for the selection of products are according to WHO guidelines which is disease burden.	onal Essential List is uploaded on the website of Drug Regulator Authority of Pakistan.	List is used to prepare the provincial list of essential medicines for health packages	The selected products are used for the preparation of Central rate contract list in all provinces
	KHI Malir	>	enatal , ficiencio	>	>	>	ucts are	ed on th	list of e	he prep
ф	Тһаграгкаг	γ	Ante it de	>	>	>	prod	loade	ncial	for t
Sindh	ТМ Кһап	Y	ation, utrier	>	>	>	on of	is upl	provi	nsed
	Sukkur	<b>&gt;</b>	nuniz icron	>	>	>	lecti	al List	e the	s are
	Kashmore	٨	re Imn ajor M	>	>-	>	the se	ssentia	orepar	roduct
	IHdd	>	vices a ice, M	>	>	>	ria for	onal E	ed to p	cted pi
	SHI	>	serv	>	>	>	The crite	The Nati	is us	sele
	SUNAH	γ	Th.	>	>	>	The	The	List	The
	LSAT Marks	1		1	4	4				
	Indicators	a. Is there an essential services package?	b. If yes, what services are included?	Is there a national essential drug list?	Are all products in the supply chain being assessed included on the essential drug list?	Are all the commodities used in this health program on the essential drug list?	What criteria are used to select a product for the list?	To which levels of the system is the national essential drugs list officially distributed?	Is the list used for product selection and ordering commodities? If yes, explain how it is used.	Other comments on product selection:
		1		2	8	4	2	9	7	∞

# 1.3 Section III: Organization and Staffing

	ATA1	γ		ē	ply	ant			<del>-</del>				ъ	ely.	S			٦Ę	ρλ			
	КЬ	٨		all th	e Sup	nport			ovinci	Je			int an	nplet	ogistic			nent c	done			
	Baluchistan	λ		µoddr	tify th	s an in			at Pr	ting tl			ureme	ed cor	t of L			curen	been			
	рндя	٨		and su	n iden	LMU i			d LML	uppor	cts.		proc	ablish	he re			he pro	c. has			
	ІВМИСН & ИР	٨		nitor	1U ca	ions.			grate	ectly s	ontra		er the	en est	ess. T			is in t	ent et			led.
Punjab	Rajanpur	٨		e, mo	nt, LN	ervent			n Inte	indire	their c		oks aft	ot be	progr			MSD	agem			provic
Pur	bakbattan	٨		rganiz	veme	se inte	hain.		10s. A	ch are	ed in 1		) it loc	has n	under			ole of	y man			s also
	Bahawalnagar	٨		d to o	impro	nt tho	pply c		ofDF	ls whi	escrib		t Unit	ver, it	work			.The r	entor			staff is
	Nuzaffarghar	Y		e use	snonu	lemer	the su		vision	s LMU	; as d		emen	howe	or the	EO.		LMU.	n, inv			eve
	рно	٨		can b	contir	d imp	ithin t		super	dh ha	work		/anag	ouse,	nonito	n of C		lity of	ibutio			istrict
	margonal Brogram	٨		e that	ins of	ms an	tors w		er the	ne Sin	ope of		tory N	vareh	d to n	rvisio		onsibi	e distr			the d
	Shaheed Benazirabad	_		ructur	the le	roble	nd ac		l unde	P of tl	eir sc		Inven	strict \	ink an	adns a		e resp	ies lik			e and
	KHI Malir	٨ .		ing to WHO, LMU, is a management structure that can be used to organize, monitor and support all the	activities within the logistics system. Through the lens of continuous improvement, LMU can identify the Supply	Chain problems, develops solution for those problems and implement those interventions. LMU is an important	ink between different organizations, levels, and actors within the supply chain.		LMUs are available at the district level under the supervision of DHOs. An Integrated LMU at Provincial	level is not available, whereas, the PPP of the Sindh has LMUs which are indirectly supporting the	government health facilities within their scope of work; as described in their contracts.		LMU is available (e-Procurement and Inventory Management Unit) it looks after the procurement and	availability of the medicines at the district warehouse, however, it has not been established completely.	It was done in order to establish the link and to monitor the work under progress. The rest of Logistics	role is served by the district under the supervision of CEO.		MSD and PPHI collectively provide the responsibility of LMU. The role of MSD is in the procurement of	medicines, while rest of all the activities like distribution, inventory management etc. has been done by			Logistics management Unit is available and the district level staff is also provided.
<u>-</u>	Тһаграгкаг	>	.; O	nager	em. T	on for	ions, l		e distr	ereas,	ties w		ureme	nes at	stabli	rict ur		ly pro	all the			nit is
Sindh	тМ Кһап	٨	Logistics Management Unit (LMU):	s a ma	ss syst	solutio	anizat		at th	le, wh	ı facili		-Proc	nedici	er to e	ie dist		ective	est of			ent U
	Sukkur	γ	nt Un	MU, į	ogisti	sdole	t org		ailable	vailab	health		e) alqı	f the r	n ord	by th		03	hiler			nagen
	Kashmore	<b>\</b>	geme	'HO, L	the l	s, dev	ifferer		ire av	not a	ment		availa	ility o	done i	served	istan:	Id PP	nes, w			s mar
	IHdd	>	Mana	g to W	withir	plem	een d	Sindh:	MUs a	evel is	overn	Punjab:	MU is	vailab	was (	ole is	Baluchistan:	1SD ar	nedici	PPHI.	KP:	ogistic
	SHI	<b>\</b>	istics	According	vities	in pro	betw	S	_	<u> </u>	60		_	σ	=	2	<b>m</b>	2	⊏	Ъ	<b>Y</b>	_
	SQNAH	<b>\</b>	Log	Acc	acti	Cha	link															
	LSAT Marks	1																				
	Indicators	Does the provincial level have a logistics	management unit?																			
		1																				

	ATA1			The		Ses	, L			SS		>	>	>	>	z	z
	КЬ			ıdget.		dicin	ecreto			ogistic		>	>	Υ	>	z	z
	Baluchistan			wn br		he me	n of Se			each le		>	>	>	>	z	z
	DHŒ			heir o		itors t	rvisio			le for		>	>	>	>	z	z
	ІВМИСН & ИР			from t		e mon	e supe	Init.		onsib		>	>	>	>	z	z
Punjab	Rajanpur			cines		Office	ler the	nent L		s resp		>	>	>	>	z	z
Pur	bakbattan			medi		e. The	วนก ฮเ	nagen		sition		>	>	>	>	z	z
	Bahawalnagar		ole.	se the		s offic	workir	ic ma	(MCC)	or po		>	>	>	>	z	z
	Muzaffarghar		availal	urcha		ugh it:	s are	Logist	) cell	ments		>	>	>	>	z	z
	рно		sare	y to p		thro	spital	t and	natior	eparti		>	>	Υ	٨	Z	z
	mergoral lenoiteM		team	onom		rectec	are ho	emen	Soordi	the d		>	>	٨	γ	Z	z
	Shaheed Benazirabad		LMU is not available For DHQ of Sindh and Puniab hospital level teams are available.	DHQ hospitals have DDO power, and they have autonomy to purchase the medicines from their own budget. The	ırers.	SHC Department procurement cell was directed through its office. The Office monitors the medicines	procurement etc. Whereas, the Tertiary care hospitals are working under the supervision of Secretory	Specialized Healthcare. They have their own Procurement and Logistic management Unit.	the Procurement cell and the Medicines Coordination cell (MCC)	le for the following activities? (If not, note the departments or positions responsible for each logistics		>	>	>	<b>\</b>	Z	z
	KHI Malir		hospi	they h	e placed directly to the manufacturers.	ent ce	the Te	ir ow	e Me	ج (اf n		>	>	Υ	<b>\</b>	N	z
ų.	Тһаграгкаг		uniab	, and	man	urem(	reas,	ve the	and th	ivities		>	>	>	>	z	z
Sindh	ТМ Кһап		and P	ower	to the	: proc	. Whe	ey ha	t cell a	ng act		>	>	>	>	z	z
	Sukkur		/ailab indh	ogo p	ectly	ment	ıt etc	e. Th	men	llowii		>	>	Υ	<b>&gt;</b>	Z	Z
	Kashmore		not av	ave	ed dir	epart	emer	Ithcar	ocure	he fo		>	>	7	<b>\</b>	Z	z
	PPHI	ATA:	LMU is not available For DHQ of Sindh an	itals h	place	SHC D	rocur	д Неа	the Pr	e for t		>	>	>	>	>	>
	SHI	F/	₹	hosp				ialize	In <b>KP</b> it is t			>	>	>	>	٨	>
	SQNAH			DHQ	orders ar	Punjab: P	supplies,	Spec	In <b>K</b>	respo		>	>	Υ	<b>&gt;</b>	Υ	Υ
	LSAT Marks									nit fully	0.25		0.25	0.25	0.25	0.25	0.25
	Indicators			If no, please check NO in	questions 2 a–h.					Is the logistics management unit fully responsib task.)	a. managing and using the	logistics management	b. forecasting quantities needed?	c. procurement?	d. inventory management, storage, and distribution?	e. product selection?	f. staffing of logistics
										2							

ATAŦ		Z	<b>&gt;</b>			نِي						sir				
Kb		Z	>			d with	HO.		=	70		U in t			nal /	o t
Baluchistan		Z	<b>\</b>		tory	y linke	and D		ationa	ocate		ole LM			regio	butior
DHŒ		Z	٨		inven	lirect	ilities		on of r	the all		s no rc			er thar	distri
ВМИСН & ИР		Z	٨		ment,	s not c	Ith fac		aratic	ity of		here i			s, othe	ge and
Rajanpur		Z	٨		ocure	stics is	ge hea		e prep	ailabil		n, so t			ticians	storag
pakpattan		Z	γ		ng, pr	id logi	-charg		s in th	nd av		ogran			s logis	ndling
Bahawalnagar		Z	٨		ecasti	HR an	n of in		litate	ting a		ical pr			orks a	or har
Nuzaffarghar		Z	٨		n, for	et for	pinio		nit faci	orecas		e vert			ho wo	ities f
рно		z	٨		electic	gpnq	with o		ent ur	the f		by th			per, w	apabil
margonal Program		z	γ		duct se	cated	more		agem	ed on		ected			e kee	and c
Shaheed Bedariranad		Z	٨		for proc	The allo	sting is		ory man	ds is bas		oeen sel			neir stor	provincial positions They have limited knowledge and capabilities for handling storage and distribution of
XHI Malir		Z	٨		s LMI	ution.	oreca		nvent	eman		eady k			ugh th	ed kno
Тһаграгкаг		Z	٨		s, use	istribı	andf		the in	n of d		cts alr			s thro	limite
TM Khan		N	٨		t level	and d	oduct		it and	izatio		rodu			ogistic	have
Znkkur		z	٨		listric	orage	the pr		ent un	tional		the p			the lo	. They
Kashmore		z	λ		t the c	nt, st	on of		ureme	rhe ra		ogran			anage	ions.
IHdd		Υ	<b>\</b>	<u></u>	MU af	geme	electio	: :Q	-proc	nds. 1	ets.	cal pro	<del>.</del>		cts m	posit
S H I		>	>	Sindh	The L	mana	The s	Punja	The e	dema	gpnq	Verti	regar		distri	vincial
SUNAH		>	>												The	pro
LSAT Marks		0.25	0.25													
Indicators	positions?	g. budgeting for the logistics system?	h. supervision and logistic staff development?													
	LSAT Marks  LSAT Marks  Bahawalnagar  Muzaffarghar  Tharparkar  Shaheed  Benazirabad  Mational Program  Mational Program  Tharparkar  Shaheed  Shaheed  Mational Program  PHQ  Tharparkar  Tharparkar  Shaheed  Sh	LSAT Marks  HANDS  HANDS  HANDS  HANDS  Sukkur  Tharparkar  Tharparkar  Shahawalnagar  Bahawalnagar  Muzaffarghar  Muzaffarghar  DHQ  Muzaffarghar  DHQ  DHQ  DHQ  DHQ  DHQ  DHQ  DHQ  DH	Indicators	O.25. C.25 HANDS	Indicators  Indica	Indicators  Indicators  Indicators  Indicators  Indicators  ISAT Marks  Iting for the logistics  Strain and logistic  O.25 Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y	Indicators  LIAT Marks  LISAT M	Indicators	Indicators Indicators  LSAT Matks  S?  ting for the logistics  Vision and logistic  O.25 Y Y  elopment?  Sindh  The L  mana	Indicators Indicators  LSAT Marks  \$\frac{1}{2}\$  ting for the logistics    \text{vision and logistic}    \text{vision between times and logistic}    vision between	Indicators Indicators  LSAT Marks  ting for the logistics vision and logistic  The L  The L  The s  dema	Indicators Indicators  LISAT Marks  LISAT Marks  FINDS  FINDS  The L  The S  Dudgs	Indicators Indicators  LSAT Marks  S?  ting for the logistics  Vision and logistic  O.25 Y Y  relopment?  Sindh  The Lamana  The s  dema  budge	Indicators Indicators  LSAT Matks  St. HANDS  LSAT Matks  LEADS  LSAT Matks  LEADS  LSAT Matks  LEADS  LEADS  LANDS  LANDS	Indicators Indicators  LSAT Marks  \$\frac{1}{2} \text{Fing for the logistics} \text{O.25} \text{Y} \text{Y} \text{V} \text{V} \text{V} \text{V} \text{V} \text{V} \text{V} \text{V} \text{V} \text{Planning} \text{In ann a logistic} \text{Co.25} \text{Y} \text{Y} \text{Y} \text{Vertion and logistic} \text{Displane} \text{Dindh} \text{Planning} \text{The Lanning} \text{Dindh} \text{Constant Planning} Constant Planni	Indicators Indicators  Indicat

	ATAŦ	Ø				>		z	>	>	>	>	z	z			
	Kb	castin	under			>		>	<b>&gt;</b>	>	<b>×</b>	>	z	>	Jing		
	Baluchistan	d fore	s are			<b>&gt;</b>		z	>	>	<b>×</b>	>	z	>	, train		
	DHŒ	ies an	tivitie			<b>-</b>		>	>	<b>&gt;</b>	>	>	z	z	natior		
	ІВМИСН & ИР	facilit	uch ac			<b>-</b>		>	>	<b>&gt;</b>	>	>	<b>&gt;</b>	z	inforr		
qe	Rajanpur	The technical aspects, like, product selection was done by the MO of health facilities and forecasting	by purchase committee under the supervision of DHO. In the Civil Hospitals or DHQs, such activities are under			  -		>	>		<b>&gt;</b>	>	z	z	The documented guidelines are in the form of official letters, LMIS templates, software information, training		7
Punjab	pakpattan	O of h	or DF			<u></u>		>	<b>&gt;</b>	<b>&gt;</b>	γ .	<b>&gt;</b>	z	z	s, soft		<b>Sindh:</b> SOP or guidelines for medicines forecasting and quantifications were not provided.
	Bahawalnagar	the M	spitals			<u></u>		>	<b>&gt;</b>	<b>&gt;</b>	γ .	<b>&gt;</b>	z	z	nplate		not pr
	nedgreffezuM 	e by 1	vil Hos	acist		<b> </b>		<i>-</i>	>	<u>,</u>	, \	<i>&gt;</i>	z	z	IIS ten		were r
	рно	as dor	the Civ	vision of purchase committee including Hospital Pharmacist		, ,		z	>	` >	<b>/</b>	>	z	z	rs, LM		tions v
	margonal lanoitaN	ion w	). In t	pital		<u> </u>		z	<b>&gt;</b>	\ \	\ \	>	z	>	lette		ıtifical
	BedariranaB	select	of DH(	g Hos				_					_		officia		l quar
	урару	duct :	sion o	cludin		>		z	>	>	>	>	Z	z	n of c		ig anc
	KHI Malir	e, pro	ıpervi	ee in		>		z	>	>	>	>	z	z	e for		castin
qp	Тһаграгкаг	ts, lik	:he su	nmitt		>		z	>	<b>\</b>	>	>	z	z	in th		fore
Sindh	TM Khan	spec	ndert	se cor		>		z	>	<b>\</b>	>	>	z	z	es are		icines
	Znkkur	ical a	iee ni	rcha		>		z	>	Y	>	<b>&gt;</b>	Z	z	delin		med
	Kashmore	echr	nmitt	of pu		>		z	>	Y	<b>\</b>	>	Ν	z	d gui		s for
	IHdd	. The 1	se con	ision		<b>\</b>		٨	٨	λ	٨	٨	λ	<b>\</b>	nente	s etc.	deline
	S H I	medicines.	urchas	uperv		>		<b>\</b>	٨	٨	γ	<b>X</b>	Υ	<b>\</b>	docun	documents etc.	<b>h:</b> or gui
	SQNAH	med	by pi	the super		>		<b>\</b>	٨	Υ	γ	<b>\</b>	Υ	٨	The (	досп	Sindh: SOP or
	LSAT Marks				es for	0.25		0.25	0.25	0.25	0.25	0.25	0.25	0.25			
	Indicators				Are there documented guidelines for:	the	logistics management information system?	b. forecasting quantities needed?	c. procurement?	d. inventory management, storage, and distribution?		f. staffing of logistics positions?	g. budgeting for the logistics system?	ision and staff nent?			
					3												

							Sindh							Punjab	qe					
Indicators	LSAT Marks	SUNAH	SHI	lHdd	Kashmore	Sukkur	Tharparkar	Tharparkar KHI Malir	Shaheed bedarirabad	mational Program	рно	Muzaffarghar	Bahawalnagar	pakpattan	Aajanpur	ІВМИСН & ИР	DHŒ	netsidoule8	Kb	ATAŦ
		Punjab: SOP (ba	<b>ab:</b> based	on W	'HO g	uideli	nes) ha	as bee	<b>Punjab:</b> SOP (based on WHO guidelines) has been provided to all districts through PSPU with the support of TRF plus in	ed to	all dist	ricts tl	ırough	PSPU	with	the su	pport	of TRI	F plus	.⊑
		the f	the form of forecasting	of for	ecasti	ng ar	nd du	antifica	and quantification tool.		nd aft	er the	And after the establishment of Primary and Secondary	lishm	ent of	F Prim	ary a	nd Se	conda	ary
		healt	hcare	Depar	tmen	t the s	ystem	has b	healthcare Department the system has been modified and incorporated in the e-procurement.	ified aı	nd inc	orpora	ted in t	he e-p	rocur	ement	ند			
		IRMN	ICH &	NP ha	s rece	antly r	modifie	ed the	IRMNCH & NP has recently modified the SCM system and quantities of medicines because LHWs have increased.	tem ar	ոժ qua	ntities	of me	dicine	s beca	use LF	IWs h	ave in	crease	ed.
		In fut	ure, th	ne For	ecasti	ng is <sub>l</sub>	olanne	dlbe	In future, the Forecasting is planned I be based on the updates of the modified quantities.	the up	odates	of the	modif	ed du	antitie	es.				
		In <b>Sindh</b>	_	nost a	II the	BHUs	are ha	nded ,	almost all the BHUs are handed over to PPP (except in Shaheed Benazirablad and Karachi), they facilitate	рР (ех	cept ir	ง Shah	eed Be	nazira	blad a	nd Kar	achi),	they f	facilita	ate
		the gov	govern	ment	for	the p	roduci	t selec	ernment for the product selection, forecasting, procurement, distribution inventory management,	recasti	ng, pı	ocure.	ment,	distrik	oution	inver	ntory	mana	geme	nt,
		storage,		ffing f	or log	; sistics,	finan	cing fo	staffing for logistics, financing for logistics and supervision. The government of Sindh procures medicines	s and s	uperv	ision.	The go∧	ernm	ent of	Sindh	procu	ıres m	edicir	Səc
		for THQ	HQ / F	SHCs (	not h	ıande	d over	· to I F	/ RHCs (not handed over to I H S). As the PPP are facilitating the government so their strengths and	he PP	P are	facilita	ting th	e gov	ernme	ent so	their	streng	gths a	pu
		capak	capabilities		end t	o be r	eflecte	ed as g	are tend to be reflected as government services.	int serv	vices.									
		KP:																		
		Unde	r the	super	vision	of Pr	ocurei	ment a	Under the supervision of Procurement and MCC and with the support of TRF plus, the health department has	and w	/ith th	e sup	oort of	TRF p	lus, th	ne hea	Ith de	epartr	nent h	٦as
		devel	pedo	the fo	recas	ting g	uidelir	ies and	developed the forecasting guidelines and computerized tool while the trainings are planned to be conducted in	terized	tool	while t	he trai	nings	are pl	anned	to be	ond:	ucted	.⊑
		few n	few months.	رخ.																
		In Ba	luchis	<b>tan</b> ar	P Pι	тА, ቲ	ne con	ventio	In Baluchistan and FATA, the convention method of forecasting (consumption based) is used, which does not	d of fc	orecas	ting (c	onsum	ption	based	) is us	ed, w	hich c	loes r	Jot

	ATAŦ	ces	nct		rier		>				-				>	
	Kb	e servi	r prod		h cou	s,	>-		pəz		PHI fo				>	
	Baluchistan	ide th	ble fo	vision	hroug	th EPH	>		outeri		er to F				>	
	DHQs	, provi	sponsi	super	lone t	:hroug	>	-	u com		led ov				>	
	ІВМИСН & ИР	I PPHI	l is re	g and	sh is c	OP is 1	>		ırough		hanc ה	vices.			>	
jab	Rajanpur	รัD and	д РРН	staffin	, whic	tion S	>		iked tł		e ther	ics ser			>	
Punjab	bakbattan	its M	nt an	eting,	\lddns	t selec	>		s are l		ich ar	logist	cies.		>	
	Bahawalnagar	rough	ıreme	gpnq	cines	roduc	>		DHQ		es, w	entral	agen		>	
	Nuzaffarghar	nt, th	Proc	gistics	medic	the p	>		While		edicin	ded co	by its		>	
	рно	artme	ole for	on, Log	m of	/s and	>		t cell.		the m	provi	naged		>	
	margonal Program	h dep	ponsik	ributic	syste	o LHW	>	s.	gemen		ocure .	er was	is maı		>	
	Shaheed Benazirabad	WHO standards. In Baluchistan, the health department, through its MSD and PPHI, provide the services	The MSD, is mainly responsible for Procurement and PPHI is responsible for product	Selection, forecasting, inventory management, distribution, Logistics budgeting, staffing and supervision.	& NP Punjab has recently upgraded the system of medicines supply, which is done through courier	The provided courier services is directed to LHWs and the product selection SOP is through EPHS.	>	dh, central level position is at district levels.	In Punjab, e-procurement and inventory management cell. While DHQs are liked through computerized		luchistan, where MSD is responsible to procure the medicines, which are then handed over to PPHI for	further Logistics arrangements. The Store keeper was provided central logistics services.	through LMU while FATA central position is managed by its agencies.		>-	
	KHI Malir	tan, tl	is ma	ageme	upgra	s is dir	>	ıt distr	entor		disnoc	ne Stol	ntral p		>	
⊆	Тһаграгкаг	luchis	MSD,	/ man	ently	ervice	>	on is a	nd inv	tware	is resp	nts. Th	<b>.TA</b> ce		>	
Sindh	ТМ Кһап	In Ba		entor)	as rec	ırier sı	>	positi	ient al	nt sofi	MSD	gemei	ile FA		>	
	Sukkur	lards.	nent.	ž, inve	ab ha	o por	>	level	uren	gemei	here	arran	J w		>	
	Kashmore	stand	nager	asting	Punj	ovide	>	ntral	-proc	าลทลยู	an, w	stics a	zh LM		>	
	IHdd	мно:	cs Management.	forec	& NP	he pr	>	<b>Jh,</b> cel	i <b>jab,</b> e	medicines management software.	<b>uchist</b>	r Logi	:hroug		>	
	SHI		of Logistic	ction,	IRMINCH &	services. T	>	In <b>Sin</b> c	n <b>Pun</b>	nedic	In Balı	urthe	In <b>KP</b> t		>	
	SQNAH	fulfi	of L	Sele	R	serv	>			_		_			>	
	LSAT Marks						1								1	
	Indicators						Is there a central-level position dedicated to logistics?	If no, skip to question 6.						Does the logistics officer(s) have the same level of	authority for decision making as other functional	unit heads?
							4							2		

	ATA1			٨	٨	>	γ		and			f the	hese		: the				n all
	Kb			٨	٨	٨	γ		acists			ind of	serving these		oer at				per o
	Baluchistan			٨	٨	٨	٨		harm			nent a	ser.		e Kee				e kee
	DHŒ			٨	٨	٨	٨		pital I			nagen	rs are		Store				d stor
	ІВМИСН & ИР			٨	٨	٨	γ		e Hos			ry ma	office		leve				vel an
jab	Rajanpur			٨	٨	٨	٨		ere ar			vento	stics		incial				ict le
Punjab	pakpattan	riate)		٨	٨	٨	٨		tal th			e-procurement and inventory management and of the	and Logistics officers		e pro				e distr
	Bahawalnagar	appropriate)		>	<b>&gt;</b>	>	<b>\</b>		Hospi			ent a			at the				at the
	nedgreffezuM	the a		>	<b>&gt;</b>	>	<b>\</b>		DHQ			curen	Pharmacist		nator				ians,
	рно	(mark the		<b>&gt;</b>	<b>&gt;</b>	<b>&gt;</b>	γ		at the			e-pro	Phar		oordir				ogistic
	margonal Program	stics?		>	>	>	<b>\</b>		/hile a			ising,	1Qs,		tics C				vel, L
	Shaheed Benazirabad								DHO, Store Keeper is at the district level while at the DHQ Hospital there are Hospital Pharmacists and			The additional Secretory Technical supervising,	Districts, DHO and store keepers. In DHQs,		National Program / IRMNCH & NP: Logistics Coordinator at the provincial level, Store Keeper at the		ے		Medicines coordinator at the provincial level, Logisticians, at the district level and store keeper on all
	KHI Malir	ible fo		<b>&gt;</b>	>	>	<b>\</b>		trict l			ical sı	pers.		NP:		eebe		rovin
	Tharparkar KHI Malis	responsible		>	>	>	٨		e dis			echn	kee		8 5		ore !		the p
Sindh	JednemaedT	e res		>	>	>	>		at th			ory T	tore		RMN		nd St		r at ·
Sir	TM Khan	thos		>	>	>	Υ		er is			cret	s pu		١/ ر		НО а		nato
	Sukkur	guot		>	>	>	Y		(eep	S		al Se	O a	es	gran		<b>e</b> :		oordi
	Kashmore	ks an		γ	γ	γ	Y		ore k	eper		lition	, В	ibiliti	l Pro	level,	Offic		es cc
	IHdd	cs tas		>	<b>\</b>	>	γ	Sindh:	10, St	store Keepers	ounjab:	ie adc	stricts	esponsibilities	ationa	District level,	District Office: DHO and Store Keeper,	(P:	edicin
	SHI	logisti		>	<b>\</b>	>	γ	Si	Ճ	Sţ	_ ح	Ė	Ö	ā	ž	Ö	<u>□</u>	□ 7	Σ
	SQNAH	e key		>	>	>	>												
	LSAT Marks	rdinat																	
	Indicators	What activities are used to coordinate key logistics tasks among those	none	formal meetings	joint work plans	written communications	department meetings	How many personnel	positions have key logistics tasks?										
		9						7											

	ATA3							>					
	Kb							>					
	Baluchistan							<b>\</b>					
	рна					s.		>					
	ІВМИСН & ИР					bilitie		>					
jab	Rajanpur					r caba		>					
Punjab	pakpattan		er,			of thei		<b>\</b>					
	Bahawalnagar		Baluchistan Provincial level: Store keeper MSD, District: Store keeper,		٠.	In other provinces, the position for the key logistics was filled, regardless of their capabilities.		<b>\</b>					
	Muzəffərghər		:: Stor		Hiring of Logistics officers at DHQ and THQ was in progress.	regar		٨					
	рно		istrict	ers	s in pr	filled.		7					
	Mational Program		ASD, D	e keep	lQ wa	. was		7					
	Shaheed Benazirabad		per N	: Stor	nd TH	gistic						s,	
			re kee	gency	энд а	kev lo		<b>\</b>				cturer	
	Tharparkar KHI Malir		il: Sto	er, A	rs at [	r the		>				anufa	
Sindh	TM Khan		al leve	Кеер	office	ion fo		<b>&gt;</b>				he m	
S	ди крэр 2nkkur		ovinci	Store	istics	posit	_	>				rom t	ease,
	Kashmore	es.	an Pro	O and	of Log	s. the		<b>∀</b>			s.	plies f	et rel
	IHdd	arehouses.	ıchist	FATA: DHO and Store Keeper, Agency: Store keepers	iring 0	vince		\ \			er strikes.	The Delays of supplies from the manufacturers,	Delay of the budget release,
	SHI	war	Balı	FAT		erpro	<u>.</u>				orter	elays c	of the
	SUNAH				In Punjab,	n oth		_			Transport	he De	elay
					_			<b>\</b>					
	LSAT Marks							1					
	Indicators				How many of the positions	with key logistics tasks are	currently filled? If they are not filled, why not?		have a strategic plan that	covers the next 1–3 years?		supply chain impact the	chain?
					∞			10			11		

1.4 Section IV: Logistics management Information System (LMIS)

	ATA3	>-		>	>	>	>	>
	Kb	<b>\</b>		<b>&gt;</b>	>	>	>	<b>\</b>
	Baluchistan	Υ		<b>&gt;</b>	>	Y	>	Υ
	DHŒ	<b>\</b>		>	>	>	>	>
	ІВМИСН & ИР	Y		<b>*</b>	>	>	>	>
ab	Rajanpur	>		>	>	>-	>	>
Punjab	bakbattan	<b>\</b>		<b>&gt;</b>	>	>	>	>
	Bahawalnagar	>		<b>*</b>	>	>	>	>
	nedgreffezuM	>		>	>	>	>-	>
	рно	<b>&gt;</b>		>	>	>	>	>
	margonal Program	٨		<b>&gt;</b>	>-	>	>	>
	Shaheed Benazirabad			>	>	>	>	>
	KHI Malir			<b>&gt;</b>	>	>	>	>
4	Тһаграгкаг	>		>	>	>	>	>
Sindh	TM Khan	٨		<b>\</b>	>	٨	>-	Y
	2nkkur -	٨		<b>&gt;</b>	>	>	>	>
	Каѕһтоге	<b>&gt;</b>	nde:	>	>	>	>	>
	IHdd	>	r) incl	>	>	>	>	>
	SHI	>	, othe	>	>	>	>	>
	SQNAH	>	HMIS	>	>	>	>	>
	Marks	1	(LMIS,	0.4	0.4	0.4	0.4	0.4
	Indicators	Is there a logistics management information system?	Does the information system (LMIS, HMIS, other) include:	a. stock keeping records (e.g., inventory control cards, bin cards, stock registers) at all levels?	b. requisition and issue records (e.g., bills of lading, shipping records, requisition/issue broachers) at all Levels?	C. dispensed to user record at service delivery point?	d. summaries of consumption data at levels above service delivery points (e.g., districts, regions, central, etc.)?	e. stock on hand?
		1	2					

	ATAŦ		>	>	z	>									
	Kb		>	>	z	٨	- C	5		).	ware.				
	netsidoulea		>	λ	z	٨	IIteriza	) ) )		nvento	e soft			ual or	
	DHŒ		>	>	Z	γ	dmod	<u>.</u> : : :		ines ii	onlin			y man	
	ІВМИСН & ИР		<b>&gt;</b>	>	z	>	pado	5 ) <u>)</u>		nedic	nt the			her b	
jab	Rajanpur		>	<b>&gt;</b>	Z	٨	Apvah	) ) ) 3		nline r	olemer			ion eit	
Punjab	pakpattan		>	<b>&gt;</b>	z	<b>\</b>	sed m			nt of o	nd im			ıtilizati	
	Bahawalnagar		>-	>	z	>	Progra	cks		opme	ped a			id its L	
	nedgreffezuM		>	>	z	>	V MH	he sto		devel	develo			ion ar	
	рно		>	>	z	>	\ \ \ \	ting t		n the	has			ormat	
	mational Program		>	>	z	>	יי	reflec		king o	thcare			of info	
	Shaheed Benazirabad		>	>	z	>	Sindh: In addition to the operating manual system receptly THWs Program has developed computerized	ogistics Management Information System reflecting the stocks.		Primary and Secondary Healthcare is working on the development of online medicines inventory	nanagement system while specialized healthcare has developed and implement the online software.			he LSAT marks is based on the availability of information and its utilization either by manual or	
	KHI Malir		>	>	z	<b>\</b>	lennen	nation §		Ithcare	ecializ			he avai	
<u></u>	Тһаграгкаг		>	>	z	٨	ting	nforn		у Не	ile sp		stem	on t	
Sindh	ТМ Кһап		>	>-	z	>	i au	nent l		ondar	em wł	aluchistan, KP & FATA	working on manual system	basec	em.
	2nkkur -	:wo	>	>	z	>	- the	nagen		d Sec	: syst	KP &	ı man	rks is	d syst
	Kashmore	us wa	>	>	z	<b>&gt;</b>	on to	Mar		ry an	ment	stan,	ng on	T ma	erize
	PPHI	e system show:	>	>	z	Υ	indh:	gistics	unjab:	rima	anage	luchis	worki	e LSA	computerized system.
	SHI	of the	>	>	z	>	Sir	: 0	Pu	Ā	Ĕ	Ba	IS.	두	8
	SQNAH	levels	>	>	N	γ									
	Marks	at all	1	Т	1	1									
	Indicators	Do information system reports at all levels of th	a. inventory balance (stock on hand)?	b. quantity dispensed or issued during a specified reporting period?	c. losses and adjustments?	d. quantities received?									
		4													

	ATA <b>-</b>			9	2	ces.											
	Kb	s are		, d	2	rovir	isitior						ssing		eve		
	Baluchistan	acilitie		ocilitic		nany p	s requi						the mi		higher	orts.	
	DHŒ	hich f		4+ 4+	-	e of r	licine					S.	. Jo dr		the	e rep	
	ІВМИСН & ИР	on w		ب و ب	<u> </u>	ractio	fmed					ment	llow		ext to	ofth	
jab	Rajanpur	nation		9	,	gular p	siono	HIS.				cer ele	ular fo		. It is r	issior	
Punjab	pakpattan	inforn		; 2	5	ot a reg	ubmis	ugh D				of tra	ne reg		egular	a subn	
	Bahawalnagar	utine			<u> </u>	h is no	ne of s	) thro	ines	JS.		ck out	od. T		not re	for the	
	nedgreffezuM	ate ro	p	40	,	Whic	the tin	ments	medici	k statı		ne sto	was gc		es was	vided	
	рно	accui	stocke		5	office.	us at	er ele	acer	r stoc		oort tl	rams	ılts.	aciliti	e pro	
	mergoral Program	<sup>F</sup> have	. overs	†e grad		strict (	k stat	s (trac	is of ti	g thei		lso rep	prog	e resu	alth f	ss wer	gular
	Shaheed Benazirabad	The stock status means, that the central-level staff have accurate routine information on which facilities are	ıt, under stocked, adequately stocked, or overstocked	According to the Logistics Management Information system in the provinces the health facilities have to		submit their monthly stock status to the district office. Which is not a regular practice of many provinces.	In routine, the health facility share the stock status at the time of submission of medicines requisition.	Stock out status of very essential medicines (tracer elements) through DHIS.	DHIS: in all provinces report stock out status of tracer medicines	P are regularly (monthly basis) submitting their stock status.		Health facility monitoring through MEAs, also report the stock out of tracer elements.	rcentage of report submission in Vertical programs was good. The regular follow up of the missing	report has made it possible to achieve these results.	e Logistics report submission in public health facilities was not regular. It is next to the higher level,	which was District office. No clear guidelines were provided for the submission of the reports.	PPP the submission of report are quite regular.
	KHI Malir	tral-lev	ly stoc	9	) 0	atus to	hare th	tial me	tock ou	sis) suk		M ygn (	ion in V	achie	n in pu	lear gu	rt are (
h	Тһаграгкаг	e cen	quate	ν. σ	2	ock st	cility s	essen	port s	hly ba		g thro	omiss	ble to	missic	. No 0	f repo
Sindh	ТМ Кһап	nat th	d, ade		5	hly st	alth fa	f very	ces re	mont		nitorir	ort su	ssod 1	rt sub	office	sion o
	<b>2</b> пққп <b>ւ</b>	ans, t	tocke	- - - -	2	mont	e he	tus o	rovin	larly (		y mo	of rep	ade i	repo	istrict	simq
	каѕһтоге	s mea	der st	, t	<u>.</u>	their	ne, th	ut sta	all p	regu		facilit	age c	nas m	gistics	vas Di	he su
	IHdd	statu	ut, un		5	ıbmit	routi	ock o	HIS: ir	P are	Punjab:	ealth .	ercent	port	e Log	hich v	PPP t
	SHI	stock	stocked ou	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		ns	드	St		ЬР		Ĭ	□ Pe	a	□ Th	>	므
	HANDS	The	stoc														
	Marks																
	Indicators	Do LMIS or other	information system reports received at the central level	provide information on stock status at the health	facility level? Please explain.								How do managers monitor	reporting rates and follow- up to obtain missing	stics reports?		
		9											∞				

	ATA1			s			z		>				arge		itor			thly
	Kb	cess.		statu			z		>				ı Incha		d mon			nom r
	netsidoule8	part of procurement process.		stock			<b>\</b>		>		ЛEAs		ırough	s,	sis an			ort or
	DHŒ	reme		n. The				>	-		ts of N		first th	r level	hly ba			ne rep
	ІВМИСН & ИР	procu		uisitio			<b>&gt;</b>		>		repor		ck is	highe	mont		out.	mit tl
jab	Rajanpur	art of		es req						1	S and		cal sto	n the	Cs on		rried	nd suk
Punjab	bakbattan	ce is p		edicin			<b>≻</b>		<u>&gt;</u>		is DHI		physi	ts froi	nd RH		s is ca	HCs ar
	Bahawalnagar	rovin		of m			<b>≻</b>		<u>&gt;                                    </u>		ı that		of the	ıry visi	HUs a		dicine	and R
	Nuzaffarghar	ct to p	ej.	e time			>		>		systen		ation (	erviso	t all B	eport	ed me	3HUs
	рно	distri	on rat	at th	ф			<u> </u>			allel		oncilia	e sup	s) visi	heir r	select	f all E
	margoral lenoitaN	m the	omissi	nitted	demar		<b>\</b>		>		ier pai		e rec	ring th	istant	bmit t	omlys	ugs o
	Shaheed Benazirabad	submission of demand of medicines from the district to province is	Normally submission rate is 100 percent submission rate.	e reports from the health facility are submitted at the time of medicines requisition. The stock status	port is part of the medicines requisition (demand)		<b>\</b>		z		onitoring of the stock out through the other parallel system that is DHIS and reports of MEAs		Public health facilities of all provinces, the reconciliation of the physical stock is first through Incharge	the health facility (when required), or during the supervisory visits from the higher levels.	Punjab, MEAs (Monitoring Evaluation Assistants) visit all BHUs and RHCs on monthly basis and monitor	e stock balance of the tracer drugs and submit their report.	During the higher level visits, physical count of randomly selected medicines is carried out.	sically check the stock status of tracer drugs of all BHUs and RHCs and submit the report on monthly
	KHI Malir	medic	00 per	acility	s requ		<b>&gt;</b>		z		ırough		ll prov	quired	Evalua	r drug	count	us of 1
ų	Тһаграгкаг	nd of	e is 1	alth fa	dicine		<b>&gt;</b>		z		out th		s of a	ıen re	oring	trace	ysical	k stat
Sindh	ТМ Кһап	dema	on rat	he he	e me		>		 z	v up.	stock		cilitie	ty (wh	Monit	of the	ts, ph	stoc
	Znkkur	on of	missi	rom t	of th				z	follo	f the		lth fa	facili	EAs (I	ance	el visi	k the
	Kashmore	missi	ly sub	orts f	s part		<b>≻</b>		z z	Due to weak follow up.	ring o		c hea	ealth	ab, M∣	k bal	er lev	, chec
	IHdd	e sub	ormal	e rep	porti		>		>	e to	onito		Publi	the h	Punja	e stoc	high	sically
	SHI	보	ž	드	ā		>		>	1) DL	2) M		_ u	o		ţ	ng the	MEAs phy
	SQNAH						<b>\</b>		>	I	(1						Durii	MEA
	Marks						1.5		1.5									
	Indicators	What is the approximate	percentage of information system reports received in	time to be used for logistics	decisions (ordering, distribution, etc.) at the	following levels:	b. regional? (district to	Province)	c. district? (Health facility to district)	d. If below 100% at any	level, explain why facilities	on time.	Are information system	records reconciled against physical inventories at each	level?		a. If yes, how is this done?	
		6											10					

	ATAŦ				other	ealth						data	stock					
	Kb		÷		) ugnc	the h	نو.					time	med,			Ω		
	Baluchistan		facilit		n thr	ble at	d abov					d real	consu			Punja		
	DHQs		nealth		matic	availa	tione			ty).		terize	ance,			als of		
	ІВМИСН & ИР		each h		infor	tities	t men			ı facilli		ndwo	ck bala			nospit		
Punjab	Rajanpur		h for (		mited	dnan	deoxe			health		is a c	of stoc			hing		
Pur	bakpattan		mont		the li	ot the	inces			n the l		ed, it	tion (			d teac		
	Bahawalnagar		nce a		share	ou pu	prov			(not i		ograde	forma			Qs an		
	nedgreffezuM		east c		ation	atus a	all the			onse		, is u	the in			at DH		
	рно		re at l		nform	no' st	vel of			ware		ystem	gives			icines		
	margon9l Frogram		isits a		ocks ir	and '	lity le			strict		ent s	els. It			/ med		
	Shaheed Benazirabad		In public and private partnerships, the monitoring visits are at least once a month for each health facility.		The manual LMIS has its limits, and medicines stocks information share the limited information through other	on system like DHIS i.e. stock out in 'yes' and 'no' status and not the quantities available at the health	facility. DHIS provide the information of health facility level of all the provinces except mentioned above.			Computerized LMIS shares the stock levels at the district warehouse (not in the health facility).		In Punjab, the DHQ hospitals inventory management system, is upgraded, it is a computerized real time data	management system which is automated at all levels. It gives the information of stock balance, consumed, stock			ng of stock outs, stock balance, near expiry medicines at DHQs and teaching hospitals of Punjab		
	KHI Malir		e mon		medi	ck out	of he			evels		ory m	ated a		ces,	ce, ne		
띡	<u>Т</u> рэгрэгкаг		ps, the		, and	e. sto	nation			tock		nvent	utom		rovino	balan		
Sindh	ТМ Кһап		ershi		limits	HIS i.	inforn			s the s		itals i	h is a	cines.	n all p	stock		
	2nkkur -		partr	ls:	as its	like D	e the			share		hosp	r whic	' medi	outs i	outs,		
	Kashmore		rivate	owing levels:	MIS h	′stem	provid			LMIS		DHQ	systen	near expiry medicines.	ng of stock outs in all provinces,	stock		
	IHdd		and p	lowin	nal LI	ion sy	DHIS p			rized		b, the	nent s		ng of			
	SHI	basis.	oublic	he fol	e man	informati	ility.	Cindh.	<u>:</u>	mpute	Punjab:	Punjal	ınager	outs and	Monitori	Monitori		
	SQNAH	pa	드	ed at 1	Ţ	inf	fac	5	<u> </u>	<u>ප</u>	Pu	드	Ë	no	Ĭ	Ĕ		
	Marks			tomat														
	Indicators		b. How often?	Is the information system automated at the foll	a. central?		b. regional?	c. district?	d. service delivery level	If no to questions 11 a–d,	skip to 13.				Briefly describe the	functions and processes that are automated.	Forecasting of medicines is	automated, stock-out reports,
				11											12			

	ATA3	the inventory management						le for	at the							ional
	Kb	anage			gram.			capab	ints) a						ъ	nd reg
	Baluchistan	ry ma			e pro			si m	eleme						Qs an	rict ar
	DHŒ	vento			s of th			Syste	acer (						or DH	e disti
	ІВМИСН & ИР	he in			cator			alysis.	es (tr						ices f	to th
ge	Rajanpur				e indi			of an	edicin	ınjab.					e serv	scess
Punjab	bakbattan	developing			rmanc			tages	tial m	s of Pu				.;	Ithcar	t has a
	Bahawalnagar	to			perfo			asic s	essen	spital				y basis	d Hea	ime. I
	nedgreffezuM	assistance			e key			ial / b	very	ivil ho				onthly	cialize	real t
	рно				of th			at init	uts of	s or c				m no :	of Spe	ded at
	margonal lenoitaN	led IT			is one			ostly	ock o	n DHC				stricts	vare (	npload
	Shaheed Benazirabad	Board, has provided			Availability of Essential Medicines (stock out status) is one of the key performance indicators of the program.			The available Information management system is mostly at initial / basic stages of analysis. System is capable for	ock outs (at district warehouse level), stock outs of very essential medicines (tracer elements) at the	health facility levels and near the expiry medicines in DHQs or civil hospitals of Punjab.				DHIS tracks indicators in all the provinces and the districts on monthly basis.	e Medicines Inventory Management software of Specialized Healthcare services for DHQs and	Autonomous hospitals. The data was recorded and uploaded at real time. It has access to the district and regional
	KHI Malir	rd, ha			ck on			nt sys	onse l	ry me				ces ar	agem	recorc
_	Тһаграгкаг		ment.		s (sto			gemel	vareho	e expi				rovin	/ Man	was r
Sindh	ТМ Кһап	formation Technology	anage		dicine		e # 7.	mana	trict v	ear the				l the p	entory	e data
	Sukkur	Techr	its ma		al Me		entioned in table # 7.	ation	at dis	and ne				s in al	ss Inv	ls. The
	Kashmore	tion	and		ssenti		ned ir	forma	uts (a	vels a				cators	dicine	spita
	IHdd	forma	tware		/ of Es			ple In	ock o	lity le				s indi		ns ho
	SHI	Punjab Int	system software and its management.		lability		Detail is m	availa	tracking st	th faci				track	Punjab: Th	nomo
	SUNAH	Punj	syste		Avai		Deta	The	tracl	heal				SIHQ	Punj	Auto
	Marks															
	Indicators	Is external assistance	provided to manage die information system? Describe.	Is the information system	used to monitor and evaluate the program's	performance?	How is logistics data recorded, managed, analyzed, and used at each level?	What indicators related to	logistics and/or product availability does the	information system track	percentage of reporting,	rational prescribing	practices, etc.)?	a. Who tracks these	indicators? How often?	
		13		14			15	16								

	ATAŦ			>	>	z	z	z	z			A	>		>	>		A N	z
	Kb			<b>\</b>	Υ	z	z	z	z			ΑN	<b>&gt;</b>		<b>\</b>	<b>\</b>		۷ ۷	z
	Baluchistan			<b>\</b>	Υ	z	z	z	z			Α	<b>&gt;</b>		<b>\</b>	<b>\</b>		>	z
	DHŒ			<b>&gt;</b>	Υ	z	<b>&gt;</b>	<b>\</b>	Υ			N A	<b>\</b>			>		^	
	ІВМИСН & ИР			<b>\</b>	λ	γ	>	>	λ			A N	>		>	>		z	NA
ab	Rajanpur			<b>\</b>	٨	Z	Z	Z	Z			NA	Y		γ	γ		A N	NA
Punjab	bakbattan			>	<b>\</b>	z	z	z	z			A N	>		>	>		4 2	N A
	Bahawalnagar			<b>\</b>	Υ	z	z	z	z			NA	<b>&gt;</b>		<b>&gt;</b>	<b>×</b>		A N	NA
	Nuzaffarghar			<b>\</b>	γ	Z	z	z	Z			A A	>		<b>X</b>	<b>X</b>		A S	NA
	рно			>	<b>&gt;</b>	z	>	<b>&gt;</b>	<b>&gt;</b>			z				<b>&gt;</b>		>	Н
	mergor9 lenoiteN			7	γ	γ	٨	γ	γ			>	γ		γ	γ		>	>
	Shaheed Benazirabad											NA							
	peeded2			<b>&gt;</b>	Υ	Z	Z	Z	Z				<b>\</b>		<b>&gt;</b>	<b>&gt;</b>		AN A	>
	KHI Malir			>	Υ	z	z	z	Z			A	>		>	>		N A	NA
<u>=</u>	<u>Т</u> рэгрэгкаг			>	>	z	z	z	z			Ą	>		>	>		A A	NA
Sindh	ТМ Кһап			>	>	z	z	z	z	for:		AN	Υ		Υ	Υ		NA	NA
	Sukkur			>	λ	Ν	z	z	Ν	oriate		¥ ∀	>		_	_		¥ Z	NA
	Kashmore		rts?	٨	λ	Ν	z	Z	Ν	appropriate for		A N	<b>\</b>		<b>X</b>	<b>&gt;</b>		A N	A N
	IHdd		repo	>	٨	<b>\</b>	>	>	٨	as		A A	<b>&gt;</b>		<b>X</b>	<b>X</b>		A A	>
	SHI		/stem	<b>&gt;</b>	λ	λ	>	>	λ	ystem	ر	AN	<b>&gt;</b>		<b>\</b>	<b>\</b>		A N	>
	HANDS	level.	ion sy	>	<b>\</b>	<b>\</b>	>	>	٨	the s	nces	A A	>		>	>		NA A	>
	Marks		ormat	0.167	0.167	0.167	0.167	0.167		svel of	k bala	0.25	0.25		0.25	0.25	pply?	0.25	0.25
	1 1		n inf	_	0	0	0	0	0	ach le	fstoc	0	0		0		resu	0	0
	Indicators		What decisions are based on information system reports?	forecasting	procurement	transport/delivery	scheduling supervisory visit	inventory management	how much to resupply	Are logistics data used at each level of the syste	a. continuous monitoring of stock balances?	a. central?	b. regional?	(monitoring of tracer elements)	c. district?	d. service delivery level	b. calculating quantities for resupply?	a. central?	b. regional?
			17							18									_

	ATAŦ	z	>		>	z	z	>			Z	<u> </u>											
	Kb	z	>		>	z	z	<b>\</b>			Z	Z											
	Baluchistan	z	>		>	z	z	<b>\</b>			Z	Z											
	DHŒ		•		>		•	•			Z	Z											
	ІВМИСН & ИР	NA	>		>	<b>&gt;</b>	>	>			Z	Z											
Punjab	Rajanpur	z	>		>	z	z	z			Z	Ξ											
Pur	pakpattan	z	٨		<b>\</b>	Z	z	z			Z	2									S.		
	Bahawalnagar	z	>		<b>\</b>	z	z	z			Z	2									officer		
	Nuzaffarghar	Z	>		>	z	z	z			Z	Z									ional		
	рно						>				Z	2									e reg		
	margon9 lenoiteM	>	>	vels?	>	<b>&gt;</b>	>	>			Z	Z					y data				age th		
	Shaheed Bedarirabad		<b>&gt;</b>	nel logistics information back to lower levels?	٨	z	z	z			Z	2					PPPs checked stock consumption against morbidity data	>			Initially the district managers and then at a later stage the regional officers		
	KHI Malir	z	>	ck to	>	z	z	z			z	Z					ainst n	PPPs normally checked before the resupply			n at a		
듄	Тһаграгкаг	z	>	ion ba	>	z	z	z			Z	2					on aga	the re			nd the		
Sindh	ТМ Кһап	z	<b>\</b>	ormat	<b>&gt;</b>	z	z	z			Z	Z					umpti	efore			gers ai		
	Зиккиг	Ν	<b>\</b>	cs inf	<b>\</b>	Z	z	z			Z	Z					cons	ked b			nanag		
	Kashmore	Z	>	ogisti	<b>\</b>	Z	z	z			Z	2					stock	chec			trict n		
	IHdd	>	>		>	<b>\</b>	>	>			>	-					cked	mally			ne dist		
	SHI	γ	<b>\</b>	o char	>	λ	>	<b>\</b>			>	-					s che	s nor			ally th		
	SQNAH	<b>&gt;</b>	>	lace t	>	>	>	>			>	-					PPF	ddd			Initi		
	Marks	0.25	0.25	re in p	0.25	0.25	0.25	0.25															
	Indicators	c. district?	d. service delivery level	What feedback mechanisms are in place to chan	Telephone	reports (particular logistics report)	Meeting	Supervisory Visit	Are issues data or	dispensed-to-user data	cross-checked against other	data sources (e.g., service	statistics, demographic	surveys, etc.)?	If no, skip to 22.	a. What type of data are	they checked against?	b. How often are they	checked against each data	type?	c. Who is responsible for	cross-checking? District	medical officer than
				19					20							21							

	ATAŦ												the		
	Kb						of last						). And		
	Baluchistan						ntity (						egular		
	DHŒ						e dna						not re		
	ІВМИСН & ИР						ing, th						orts is		
jab	Rajanpur						eceiv						of repo		
Punjab	bakbattan						te of r						sion c		
	Bahawalnagar		akers.				he da		arge.				ubmis		
	nedgreffezuM		ion m				med, 1		In-ch				trict (s		ose.
	рно		l decis				consu		acility				he dis		y purp
	Mational Program		ointec				cines		alth f				y to t		iddns
	Shaheed Benazirabad		е арр				medi		the he		10.		facilit		and re
	KHI Malir		ogistic information is provided to the appointed decision makers.				The information was about the stock in hand, medicines consumed, the date of receiving, the quantity of last		The Health facilities under the supervision of the health facility In-charge.		The Logistics staff under the supervision of DHO		It was provided on monthly basis from health facility to the district (submission of reports is not regular). And the		This information was used for procurement, and resupply purpose.
_	Тһаграгкаг		rovide				tock ii	ded.	pervi		ervisic		from	sseco.	ocure
Sindh	ТМ Кһап		ın is pı				the s	supply and the medicines demanded.	the su		e sub		/ basis	Annual reports are for bidding process.	for pr
	Зиккиг		matic				about	ines c	ınder		der th		onthly	r bidc	nseq
	Kashmore		infor				ı was	medic	ities L		aff un		on m	are fo	n was
	IHdd		ogistic				natior	d the	h facil		ics sta		vided	ports	matio
	SHI		Yes, the l				inforr	oly an	Healt		Logist		as pro	ual re	infori
	SQNAH		Yes				The	dns	The		The		It w	Ann	This
	Marks														
	Indicators	Regional officers	a. Is logistics information	provided to the appropriate	decision makers for logistics	planning?	b. What information is	provided?	c. Who provides the	information?	d. Who receives the	information?	e. How often?		f. How is the information used?
			22												

1.5 Section V: Forecasting

								Sindh								Punjab						
	Indicators	Marks	SQNAH	SHI	lHdd	КаѕҺтоге	Sukkur	пвих МТ	Тһаграгкаг	KHI Malir	bədahedd Benazirabad	margonal Program	рно	nedgreffezuM	Bahawalnagar	bakbattan	Rajanpur	ІВМИСН & ИР	DHQs	Baluchistan	Kb	ATA3
П	Describe the forecasting	_	In the		government		system,	, the		Consumption	on based		methodology	gy of		forecasting	was		observed.	۷	complete	ete
	process		comp	compliance w	with	the \	VHO r	ecom-	mend	ations	ith the WHO recommendations were not observed in the forecasting process. The process of the	ot obs	erved	in the	forec	asting	proc	ess. T	he pr	ocess.	of t	-he
			forec	forecasting is		tiated	at th	e regi	onal k	evel (	initiated at the regional level (provincial procurement cell) and the demand of the medicines were	l proc	ıremeı	t cell,	and t	he de	mand	of th	ne me	dicine	ss we	ere.
			requ	ested 1	from t	he dis	tricts.	The d	listrict	s colle	requested from the districts. The districts collect the demand of the health facilities in order to compile a report for	emand	of the	healt	ا facili	ies in	order	to cc	ompile	e a re	oort f	for
			subn	nission	. Base	d on	the inf	ormat	ion p	rovide	submission. Based on the information provided in the report the district calculated the final quantities which were	report	the d	istrict	calcula	ted th	e fina	ıl qua	ntitie	s whic	h we	ire .
			furth	er sent	t for b	idding	; proce	SS. N	ormal	ly, the	further sent for bidding process. Normally, the process is initiated at the start of fiscal year (July to June), and it takes	is initia	ated at	the st	art of 1	scal ۱	ear (J	uly to	June	), and	it tak	ses
			1 to .	1 to 2 months		comp	for completion.															
	a. Who initiates it?		The !	The Provincial		partm	ent of	healt	h, call	s for t	department of health, calls for the forecasted quantities for opening of bids.	sted q	uantiti	es for	penin	g of bi	ds.					
	b. When does it take place?		June	June of every		month																
	c. How long does the process take?		one I	one month																		
7	Are forecasts developed using:	sing:																				
	a. dispensed-to-user	1																				
	data? (consumption data)		>	>	>	>	>	>	<b>&gt;</b>	>	>	>	>	>	>	>	<u> </u>	>	<b>&gt;</b>	<u></u>	>	>
																						l

	KP FATA	<b>&gt;</b>	<b>&gt;</b>		z >	>	dity,	not	ors		z	
	Baluchistan	<u> </u>	<i>&gt;</i>		z	>	norbic	does	k fact		z	
						>	lity, n	ri star stem	IP ris			_
	DHQs		>		Z	>	nortal	he sy	H & N		Z	_
	ІВМИСН & ИР	<u> </u>	>		Z	>	n as n	ugh t	MNC		Z	_
Punjab	 Rajanpur	>	>		Z	>	r, sucl	Altho	IP / IR		Z	_
Pu	pakpattan	>	>		z	>	secto	tion. (	hile N		Z	_
	Bahawalnagar	>	>		z	>	ealth :	nstitul	red, w		z	
	nedgreffaruM	>	>		z	>	d to h	its Co	review		z	
	рно	>	>		z	>	relate	ates in	were		z	
	mergoral lenoiteM	>	>		z	>	ations	ber Sta	actors		z	
	bəədad bederizenə8	>	>		z	>	Health statistics include both empirical data and estimations related to health sector, such as mortality, morbidity,	core WHO activity. It is mandated to WHO by its Member States in its Constitution. (Although the system does not	orbidity based calculation but the risk factors were reviewed, while NP / IRMNCH & NP risk factors		z	
	KHI Malir	>	>		z	>	data	HO by	n but		z	
듐	Тһаграгкаг	>	>		z	>	irical	to W	ulatio		z	
Sindh	пвих МТ	>	>		z	>	h emp	dated	d calc		z	
	Sukkur	>	>		z	>	le bot	s man	/ base		z	
	Kashmore	>	>		z	<b>&gt;</b>	nclud	y. It is	ˈbidit		z	
	IHdd	>	>		>	>	istics	activit		ved.)	>	
	SHI	>	>	owing	>	٨	Health statistic	WHO	consider the m	were observed.)	>	
	SQNAH	>	>	he foll	>-	>	Heal	core	cons	were	>	
	Marks	1	1	sing t	1	1					П	
	Indicators	b. distribution/issues data?	c. stock on hand at all levels?	Are forecasts developed using the following:	a. demographic data or disease prevalence/morbidity?	b. service statistics?					forecasts val comparing pr nated consur	with
				3	I	1	1				4	

	ATA3										ıs,			<u> </u>	÷.		
	Kb	ies									riatior			е уеа	tion o		
	nstsidoulsa	epanc									nalva			kes on	usumb		
	DHŒ	discr									regio			. It ta	in cor		
	ІВМИСН & ИР	(dnuk									and			NEDL	dded	cks.	
jab	Rajanpur	Zinc s									asona			n the	al is a	of sto	
Punjab	pakpattan	S and									ns, se	ن		d fror	ment	dout	
	Bahawalnagar	lin, OR									ficatio	ods, et		selecte	of incre	mainec	
	Muzaffarghar	noxicill									quanti	ut peri		were	y, 5% c	hich re	
	рно	es (Ar									sts or	o-yoo		asting	ormall	nes w	
	margon9l lanoitaM	nedicin									foreca	list, st		r forec	ns. No	nedicii	
	Shaheed Benazirabad	the requirement of the assessment the medicines (Amoxicillin, ORS and Zinc syrup) discrepancies							It was observed that the ORS has smallest discrepancy.		The other factors include; consolidating decentralized forecasts or quantifications, seasonal and regional variations,	standard treatment guidelines, national essential drug list, stock-out periods, etc.		In Department of health of all provinces, medicines for forecasting were selected from the NEDL. It takes one year	ption, which covers the seasonal variations. Normally, 5% of incremental is added in consumption of	last year quantities. More incremental are added for medicines which remained out of stocks.	
	KHI Malir	sessm	elow.						est di		в десе	al esse		s, me	eason	l are a	
ф Н	Тһаграгкаг	the as	ple bo						small		dating	ationa		vince	the s	nental	
Sindh	тМ Кһап	nt of	mentioned in the table below.						S has		onsoli	าes, ทล		all pro	overs	ncren	
	<b>2</b> пққпւ	ireme	ed in			esics			he OF		nde; c	uidelir		lth of	hich o	Jore i	
	Каѕһтоге	redn	entior		<u>}</u>	Allaig			that t		s inclu	ent gı		of hea	on, w	ies. N	
	lHdd				9	Antibiotics and Anaigesics			erved		factor	reatm		nent c	umpti	uantit	
	SHI	According to	observed are			מוסוום			s ops		other	dard t		partn	stock consum	rear q	
	SQNAH	Acco	opse		 	All			lt wa		The	stan		In De	stoc	last )	
	Marks																
	Indicators	How close have most	forecasts been to actual consumption?	a. How many products	had serious forecasts	discrepancies in the past	2 years (+/- 25%)?	c. Which products had	the smallest forecast	discrepancies?	What other factors are	considered in the	preparation of forecasts				
		2		9							7						

	ATA1	>	This		the			z									>
	Kb	>			ly of			>									<b>\</b>
	Baluchistan	>	in forecasting.		ddns			z									>
	DHQs	>	in fo		ase in			z	TB								γ
	ІВМИСН & ИР	>	ered		incre			z	and -								<b>\</b>
ab	Rajanpur	z	considered		the			>	accine								>
Punjab	pakpattan	z	were c		ilitate			>	ive, va		guisse	Ω 					>
	Bahawalnagar	z	plans w		all times, facilitate the increase in supply of the			>	racept		r	<u> </u>					٨
	nedgreffezuM	z			all tim			>	e cont		furthe	5					٨
	рно	>	programmatic		at			Z	/ for th		ad for	5					Å
	Mational Program	>			acilitie			z	eliver		idmo			ivity.			γ
	Shaheed BedarizanaB	z	n of the	is based on the availability of the budget.	decision like expansion of the health facilities,			z	/ TRF /the delivery for the contraceptive, vaccine and		lower level (health facilities) provides the data that is compiled for further processing	מ נומר ו		The private sector do not participate in forecasting activity.			>
	KHI Malir	z	expansion	y of th	of the			z	_		יה קר ה	2		forec			>
듐	Тһаграгкаг	z		ilabilit	sion			z	sistan		idec +			ate in			٨
Sindh	пв Кһап	z	for the	ıe ava	expar			z	ken any external assistance		, pro	5		articip			<b>&gt;</b>
	Sukkur	z		on th	- Iike			z	exter		ıli+ipo	5		not pa			Å
	Kashmore	z	required	based	cision			z	ın any		th fa	5		op ac			>
	IHdd	>	cines	ion is				z	ot take		ead) la			e sect			<b>\</b>
	SHI	>	The medicines	consideration	In PPP, such	medicines.		z	PPP has not ta		ar lave	ב ב		privat			γ
	SQNAH	>	The	cons	In P	med		z	ЬРР		Š			The			γ
	Marks	Н					1										1
	Indicators	Do forecasts take into account programmatic	plans				a. Is technical assistance	provided to develop forecasts?	b. If yes, by whom?	What is the role of	regional or lower levels	in the forecasting	process?	How does the private	sector participate in the	forecasting process?	Are forecasts updated at least annually?
		∞					6			10				11			12

	ATA4		>				z									
	Kb		>				z							The		
	Baluchistan		>				z							staff.		
	DHQs		>				z							ıment		
	ІВМИСН & ИР		>				z				get.			goveri		
ab	Rajanpur		>				z				ny bud			f the		
Punjab	bakbattan		>				z				d in ar			cies o		
	Bahawalnagar		>				z				It was observed, that the cost of forecasting and quantification was not included in any budget.			g activity cannot be carried out properly, due to lack of competencies of the government staff. The		
	Muzaffarghar		>				z				not ir			of con		
	рно		>				z				n was			o lack		
	margonal Program		>				z				ficatic			due t	cks.	
	Benazirabad						_				uanti			ɔerly,	of sto	
	ураруви		>				Z				and q			it pro	cess	
	KHI Malir		>				z				sting			ied ou	s or e	
Sindh	Тһаграгкаг		>				z				foreca			e carr	k out	
Sin	пвиУ МТ		>				z				st of			not b	e stoc	
	<b>2</b> пққпւ		>				z				the cc			y can	dle th	
	Каѕһтоге		>				z				that			activit	o han	
	IHdd		>				z				erved,			sting	able t	
	SHI		>				z				s ops			The forecastin	staff, is unable to handle the stock outs or excess of stocks.	
	SQNAH		>				z				lt wa			. au	staff	
	Marks		1				1									
	Indicators	13 Are forecasts prepared on a schedule that	coincides with local	budgeting and	procurement cycles?	14 Are long-term (e.g., 3 or	more years) forecasts	prepared?	15 Does the DOH and/or	other donors cost out	forecasts and	incorporate them into	the budget planning?	16 Other comments on	forecasting:	
		1				1			1					I		

1.6 Section VI: Obtaining Supplies/Procurement

	ATAŦ	vel															>			
	Kb	rict le							close								>			
	Baluchistan	at the district level							nent cell and the logistics staff is either from same unit (districts) or at provincial level, works in close								>			
	DHŒ	e at th							el, wo								>			
	ІВМИСН & ИР	nmitte							ial lev								>			
Punjab	nugnejeA	nt con							rovino								>			
Pur	pakpattan	procurement committee							or at p								>			
	Bahawalnagar								ricts) (								>			
	nedgreffezuM	nd the							it (dist								>			
	рно	evel aı	S.						me uni								>			
	mergor9 lenoiteN	procurement cell at regional level and the	isible for the planning and ordering of medicines.						om saı								>			
	Shaheed Benazirabad	at reg	g of me						ther fr								>			ents:
	KHI Malir	nt cell	dering						ff is eit								>			elem
	Tharparkar	reme	nd or						cs sta								>			ystem
Sindh	пвих МТ	procu	ning a						ogisti	4: 9	pitais						<u></u>			stics s
S	г 2 п к к п к	In the government system, the	e plan						the l	2 c + i 2 c d C L C c d+ d+i	<u> </u>						<b>&gt;</b>			g logis
	Kashmore	/ster	or the						ill and	2	ы ГО						>			owin
		ent s	ible f						ent ce	4 4 5										e foll
	IHdd	ernm	suod						ıreme								>			ınt th
	S H I	e gov	re res						The procuren		coordination						>			accor
	SQNAH	In th	is more respon						The	0							>			e into
	Marks																1			ıns tak
		١٢	۵۵									ics								nt pla
	Indicators	Who is responsible for	procurement planning and ordering and	scheduling of	shipments (e.g.,	logistics unit,	procurement unit) at	appropriate levels?	Describe the	coordination between	staff or unit(s)	responsible for logistics	activities and	procurement staff	Are short-term	procurement plans	based on forecasted	needs? (at least for	one quarter)	Do these procurement plans take into account the following logistics system elements:
		1							2						3					4

	ATAŦ	>	>	z	z	z	z	>	IEC	
	Kb	>	>	z	>	Z	z	>	sion,	
	Baluchistan	>	>	z	z	Z	z	>	expan	
	DHŒ	Υ	>	z	z	<b>&gt;</b>	z	<b>\</b>	ges or	
	ІВМИСН & ИР	Å	٨	Ν	Z	٨	Z	Å	ι chan	
Punjab	Rajanpur	٨	<b>\</b>	N	Z	Z	Z	γ	ogram	
Pur	pakpattan	Υ	>	Ν	z	Z	Z	γ	ıd spu	
	Bahawalnagar	٨	>	Z	Z	Z	Z	<b>\</b>	ic tre	
	Nuzaffarghar	٨	>	z	z	Z	z	٨	ograph	
	рно	<b>&gt;</b>	>	z	z	<b>&gt;</b>	z	Υ	e demo	
	mergor9 lenoiteM	>	>	z	z	>	z	>	ike the	
	Shaheed Benazirabad		>	Z	z	z	z	<b>&gt;</b>	actors	
	KHI Malir	>	>	Z	z	z	z	>	Yes, procurement plan are responsive to other factors like the demographic trends, program changes or expansion, IEC campaigns	
۔	Тһаграгкаг	>	>	z	z	Z	z	>	ve to	
Sindh	тМ Кһап	λ	>	N	z	Z	z	λ	ponsi	
	<b>2</b> пқкпւ	γ	>	Z	z	Z	z	γ	ire res	
	Kashmore	Y	>	Z	z	Z	Z	Y	plan a	
	IHdd	>	>	>	>-	>	>	<b>&gt;</b>	ement	
	SHI	>	>	>	>	>	>	>	rocure	
	SQNAH	>	>	>	>-	Z	>	>	Yes, procur campaigns	
	Marks	1	П	1	П	1	1	1		to:
	Indicators	a. current inventory levels (stock on hand)?	b. consumption (dispensed to user or issues)?	c. losses and adjustments?	d. required order lead times of suppliers/donors?	e. established stock levels, if relevant (i.e., maximum and minimum levels)?	55	g. need for safety stock?	Are procurement plans responsive to other factors related to product supply and	
									2	9

	ATA3						ΑN						
	Kb	ugn					NA				nes in quire		n was
	Baluchistan	PPP, normally, procures through					>				nedicir hey re		juisitio m.
	DHŒ	rocure						>			es of r that t		syster
	ІВМИСН & ИР	ally, p					NA	>	NA	>-	labiliti ioned		edicin
Punjab	Rajanpur	norm	urers.			els:	N A	NA	z	>	e avail ment		t no m imuni
Pur	bakbattan	. PPP,	nufact			ng leve	NA	NA	z	٨	for th A, has		am but or con
	Bahawalnagar	opliers	ed mai			ollowii	NA	NA	z	<b>*</b>	sment in FAT		progra
	nedgreffezuM	ed sup	qualifie			: the f	NA	NA	>	>	assess ealth,	turer.	ional
	рно	qualifi	h prec			me, at		>			he HF ıt of h	anufac	ith Nai eak cc
	margon9 lanoitaN	ılly pre	throug	نِـ		riate ti	AN	NA	z	<b>&gt;</b>	evel. T artmer S.	om ma urer.	able wi
	Shaheed Benazirabad	Yes, the medicines procured by the suppliers, are actually prequalified suppliers.	oppliers and from Public health facilities, through prequalified manufacturers.	Yes, all the product in the procurement list is from NEDL.		approp	AN	NA	z	>	Due to the limited scope of assessment, at the district level. The HF assessment for the availabilities of medicines in Baluchistan, KP and FATA was not carried out. The Department of health, in FATA, has mentioned that they require medicines as they have stock outs in the health facilities.	1. Civil Hospital Sukkur: Amoxicillin suspension delay from manufacturer. 2. THQ hospital Rohri: Zinc syrup delay from manufacturer.	<b>3. THQ Hospital Kandkot</b> : Stock of Zinc syrup was available with National program but no medicines requisition was generated by the dispensary. Which in turn is manifesting a weak coordination or communication system.
	KHI Malir	oliers, aı	ealth fa	ist is fro		d at the	ΑN	ΑN	z	>	at the d d out. T health	ension rom ma	yrup w. urn is m
ų	Тһаграгкаг	dns :	blic h	nent		:aine	NA	N A	z	>	nent, carrie in the	susp elay t	Zinc s h in t
Sindh	ТМ Кһап	y the	m Pu	curer		ıd obı	AN	A A	z	>	sessr not o	xicillir rup d	ck of Whic
	Зиккиг	red k	nd fro	e pro		ed ar	NA A	NA A	z	>-	of as A was stock	Amo; inc sy	<b>t</b> : Sto
	Kashmore	s proc	liers ar	ct in th		procur	AN A	AN A	z	>	l scope id FAT, have s	ukkur: ohri: Z	<b>andko</b> dispen
	IHdd	dicine	ddns	produc		ducts	N A	>	>	>	imited , KP ar s they	oital Su oital Ro	<b>pital K</b>
	SHI	he me	prequalified su	II the		all pro	Ϋ́	z	z	z	o the l histan cines a	il Hosı Q hosı	<b>3. THQ Hospit</b> generated by 1
	SQNAH	Yes, t	prequ	Yes, a		ınts of	A	>	>	>	Due t Baluc medic	1. Civ 2. TH	3.TH
	Marks					amor	0.2	0.2	0.2	0.2			
	Indicators	a. pre-qualified	suppliers?	b. products on the national essential	drugs list?	In general, are the correct amounts of all products procured and obtained at the appropriate time, at the following levels:	a. central?	b. regional?	c. district?	d. service delivery point?		Specify the products, if any, that do not arrive in	a timely manner, or in appropriate amounts, and why.

	ATAŦ				ıs	spı			9,			S								>		
	Kb	Emergency			rer ha	deper			ts 197			naltie		<u>e</u>						>		
	Baluchistan	Emer			ufactu	, it all			rug Ac			the pe		orm th						>		
	DHŒ	lgets.			, Man	ylddn			pon D			turer,		lelay f						>		
	ІВМИСН & ИР	of buc			egally.	f the s			sed u			nufac		ere is o						>		
jab	Rajanpur	lease			ures. I	time o			are ba			m ma		ies the						>		
Punjab	bakbattan	the re			nufact	lead .			rules			lay fro		oenalt						>		
	Bahawalnagar	l upon	et.		ıe maı	at the			These			In case of any delay from manufacturer, the penalties		h the p						>		
	nedgreffezuM	placec	pndg		rs to th	donor,			owed.			ise of		en wit						>		
	рно	Normally, there is quarterly procurement and the orders were only placed upon the release of budgets.	if there is any delay in the release of the budget.		ealth facilities, of all provinces, DDO submit the orders to the manufactures. Legally, Manufacturer has	60 days to supply the medicines. If any medicines provided by the donor, at the lead time of the supply, it all depends			In the Public health facilities, all the procurement laws has to be followed. These rules are based upon Drug Acts 1976					d from the department. It has been observed that even with the penalties there is delay form the						>		
	margon9 lanoitaN	s were	elease		nit the	ided b			as to			atus of medicines was to do regular monitoring.	)	rved t						>		
	Shaheed Benazirabad	order	the re		J subr	s prov			laws h			r mon		opse ı						>		
		nd the	elay in		ss, DD	dicine	ıres.		ment			egula	)	s beer						>		
	Tharparkar KHI Malir	ent a	any de		ovince	y me	ocedu		ocure.			op o		. It ha								
qþ		rem	e is		ll pro	If ar	al pro		ne pr			vas t		nent.						>		_
Sindh	ТМ Кһап	orocu	ther		, of a	ines.	tion		all t			nes v		partr						>		_
	Sukkur	erly	de, ii		lities	nedic	aniza		ities,			edici		e de						>		
	КаѕҺтоге	quart	procurement can be made,		th faci	/ the n	n and organizational procedures.		h facil			s of m		om th						>		
	IHdd	nere is	ıt can			iddns			c healt		ules.	statu		sued fr		er.				>		
	SHI	ally, th	remer		In the Public h	ys to	on the situatio		Publi		and DRAP rules.	The pipeline st		(fine) are issue		manufacturer.				>		
	SQNAH	Norm	procu		In th	60 da	on th		In the		and D	The p	•	(fine)		mann				>		
	Marks																	1				
	Indicators	a. What is the process	for adjusting procurement plans in	case of a budget shortfall?	b. What are the	procedures and time frames for ordering	Ξ	and donors?	c. Do these take into	account trade,	regulatory, and currency	What is done to	monitor/manage the	coordination of	procurement plans	among	suppliers/donors?	a. Is pipeline status	regularly monitored so	procurement decisions	can be made to avoid	stock outs?
		∞										6						10				

Kashmore PPHI
<b>PPP</b> it is the Procurement and logistics team. Mostly, PPP has established prequalified suppliers, who are responsible to supply the product in time. If there is delayed from manufacturer, they buy it from distributor or
from retails to ensure in time supply.
Sindh
In Sindh, at the district level, the procurement cell is present for each district. Whereas, in vertical program, the procurement cell is working at regional level. At DHO hospitals the pipeline status is monitored by
Pharmacist.
Funjab The Procurement cell monitor these activities on weekly basis at secretary office, in which DHO, Manufacturer, DTL and central procurement cell participate. IRMNCH & NP Logistics and procurement cell. While in DHQs the
status is monitored by Pharmacist.  Baluchistan, KP and FATA status is monitored by procurement Cell.
Yes, in the public sector and PPP the procurement cell is responsible for the issue tenders, evaluate bids, and monitor
supplier performance.
The Programs have written procedure for the inspection of the quality of medicines supplied by the manufacturer. They
אבווסווו אוואזוגמו אבו ווגמנוסווז סו נווב זמאאוובת זנסבא. דווב אוסכמו בוויבוו כסווווווננבב ווסווונסוז נווב אממונינבז זמאאוובת א

Baluchistan KP ATAŦ	d by the b, the	d by the b, the nent analytical llect the	d by the b, the nent analytical llect the rt has legal
DHQs	supplie f the lal	overnm e to co	overnm overnm e to col
ІВМИСН & ИР	atches eport o	atches eport o	atches eport o ponsible gove
Rajanpur	of all b ctory r	of all b ctory r	of all b ctory r ctory r are res are res s and t
oakbattan	mples satisfa	mples satisfa	mples satisfa
Muzaffarghar Bahawalnagar	ity. Sa asis of	ity. Sa asis of issuran	ity. Sa asis of issuran ig Insp the me
DHQ	of qual n the b	of qual n the b. uality a he Dru	of qual n the b. he Drusis.
Senazirabad Benazirabad Vational Program	onfirmations sting labs. C	the manufacturers as well as required laboratory confirmations of quality. Samples of all batches supplied by the manufacturer were sent to the government drug testing labs. On the basis of satisfactory report of the lab, the department can issue and distribute the medicines.  According to the procurement rules, there is a requirement of quality assurance report from the government analytical lab, to ensure the quality of each batch of medicines procured. The Drug Inspectors are responsible to collect the samples of the medicines procured and submit for quality analysis.	vere sawell as required laboratory confirmations of quality. Samples of all batches supplied by the vere sent to the government drug testing labs. On the basis of satisfactory report of the lab, the nissue and distribute the medicines.  Procurement rules, there is a requirement of quality assurance report from the government analy he quality of each batch of medicines procured. The Drug Inspectors are responsible to collect the medicines procured and submit for quality analysis.  Inality issue, the manufacturer is responsible to replace the medicines and the government has legal cute the supplier, if required.
Tharparkar KHI Malir	the manufacturers as well as required laboratory co manufacturer were sent to the government drug te department can issue and distribute the medicines.	ed laboratory rnment drug the medicin there is a re tch of medic	ed laboratory rnment drug rhe medicin there is a re tch of medic and submit f ufacturer is r
TM Khan	e govel tribute	e govel tribute t rules, ach bat	tribute e govel trules, trules, ach bat e mani e mani er, if re
э гар дан гар	nt to th	nt to th and dis remen ity of e	and dis remen ity of e ies pro ssue, th
Kashmore	ere ser issue a	ere ser issue a procu	ere ser issue a procu
	turer w	turer we the can go to the result of the r	turer went can grothe sure the rofthe rofthe rofthe ropesec prosec
HANDS the manufactu	nanufac	manufacturer v department car According to th lab, to ensure t samples of the	manufacturer were sent to the government department can issue and distribute the me According to the procurement rules, there is lab, to ensure the quality of each batch of m samples of the medicines procured and sub In case of any quality issue, the manufacturrights to prosecute the supplier, if required.
Marks	L 0		
Indicators of quality? Please	explain.	explain.  What are the procedures for quality assurance, who is responsible for it, and how often are they done?	what are the procedures for quality assurance, who is responsible for it, and how often are they done?  Is there a procedure for recording and reporting complaints about product quality to suppliers? Please explain.
		13 7 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	

1.7 Section VII: Inventory Control

	ATAŦ						_	2000	cnaa		note	Š Š		A A	z					
	КР		"IInd				n anc	2	n D		lease	Ϋ́		A A	z	>		shed		an
	netzihouleB		and ו				oensic	2	ارد عا		d) pa	z	•	N A	z	>		stabli		et as
	DHŒ		The inventory control system, is followed by the public health facilities was actually a mixture of "push and pull"				Considering the assessment requirement: Amoxicillin suspension, ORS and Zinc Syrup. Amoxicillin suspension and	7	tile idli sappiy requilent, and zinc syrup, needs		aintain	Ϋ́		AN	Na	γ		Sindh: The complete supply of products at any level for maximum and minimum were not properly established		Minimum levels of the tracer drugs is established. The minimum quantity level was also set as an
	ІВМИСН & ИР		xture				moxici	+400	מווע		d be m	ΔX		>	ΑN	>		not pro	) <u>.</u> )	vel wa
Punjab	Rajanpur		lly a m				yrup. A		ייבלמוו		s shou	AN		N A	z	>		Were		intity le
P	pakpattan		actua				Zinc S	2	(Iddns		oduct	Ϋ́		N A	z	>		im		m qua
	Bahawalnagar		es was				Sand	-	ב ב ע		pply pr	Ϋ́		A A	z	>		nim be		inimu
	Muzəffərghər		facilitie				on, OR				full sul	ΑN		A A	z	>		um ar		The m
	рно		ealth i				spensi	appliant only to the transfer of the second			which	ΑZ		A A	z	>		maxim		lished.
	margonal lenoitaM		Jolic		es.		llin su	+	בן בו		els at	ΑN		z	>	>		ol for	; ;	estab
	Shaheed Benazirabad		the pr		based on the availability of medicines.		oxici	16:1-	ıcıaı).		k leve	NA		A A	_			V PV6		si sgr
	KHI Malir		d by t		of me		t: Am	2	באאם		stoc	_			Z	<b>&gt;</b>		at an		er dru
			lowe		ility		emen	2	אַ ער		imum	N A		N A	z	>		ducts		trace
Sindh	Тһаграгкаг		is fol		/ailab		equire	7 25112	r ugs		nim k	Σ		A A	z	>		Force	<u>.</u>	of the
Si	TM Khan		stem,		the av		ent re	7	ב ב ב	plies.	m and ion)?	Ϋ́		A A	z	>		2 2		vels (
	Зиккиг		sks lo		d on t		essm	- - - -	5 =	e sup	ximur s sect	₹		A A	z	>		dris e	<u>.</u> i	um le
	Каѕһтоге		/ contr		s base		he ass	7	מממ	d in the supplies.	for ma	ΑN		NA	z	<b>\</b>		mplet	<u>.</u>	Minim
	IHdd		inton		system. It wa		ring t	<u>.</u>	ח = 5	to be include	icies f	z	⋖	z ∢	z	٨		no eu		Punjab: The
	SHI		inve		em.		side	9	์ 	e in	l pol els ir	z	۷	z 4	z	>		_ T:4		jab:
	SUNAH		The		syst		Cor	000	2	to b	ished n lev	ΔN	2	NA	z	>		Sing		Pur
	LSAT Marks										stabl	0.5		0.5	0.5	0.5				
	Indicators	Specify what type of	inventory control	system is used (e.g.,	push, pull, etc.) and	describe the system.	What products are	considered by the	program to be in full	supply?	Are there guidelines and established policies for maximum and minimum stock levels at which full supply products should be maintained (please note current maximum and minimum levels in comments section)?	a At the central level?		b. At the regional level?	c. At the district level?	d. At the service delivery	point level?	a. Are the inventory	controls guidelines for	full supply products
		1					2				3							4		

	ATAŦ											s are			94	ַ				>	-				
	Kb	at the										stock			ity at i	ורץ מני	- Ca			>	-				
	Baluchistan	done	s not					IIS.				d, the			lidelie		2 d2 L			>	-				
	DHŒ	is was	/, it wa					is in DF				deman			ve ad+	רווכ מאי	ממוכו			>	-				cturer.
	ІВМИСН & ИР	ility. Th	quantity					hly bas				icine's			to sise	1450 CI	ב			>	-				manufa
Punjab	Rajanpur	availab	ioned (					n mont				ne med			d adt n		ו כו מאַ			>	-				m the
Pu	bakbattan	stock	ment					ted or				ing th			o paris		- A			>	-				ed fro
	Bahawalnagar	days	ın the					repor				recei	ند		oro ice	45	רוועא			>	-				ırchas
	Nuzaffarghar	h is 45	ess tha					been				el. On	n for i		W (300	w (co)	dget.			>	_				ctly pu
	рно	ealth facility assessment conducted by MEAs which is 45 days stock availability. This was done at the	time of assessment of the health facility. Even if the stock was less than the mentioned quantity, it was not		ocks out status of these medicines were observed.			MEAs on monthly basis and also the stock outs has been reported on monthly basis in DHIS.				The information of stock out status was noted at the district level. On receiving the medicine's demand, the stocks are	ssued from central warehouse. There was no automated system for it.		s are not included in the full sunnly (tracer medicines) were issued on the basis of the	historion (district marshause) If the harlth facility has DD names that can aurehave the modicines as I am	ingrier rever (district warefrouse). It the freatth facility has DDO power Purchase: if required, depending upon the availability of the budget.			>	-				e of the budget, the required medicines were directly purchased from the manufacturer.
	margonal Program	oy ME	e sto		ere o			stock				he dis	omate		tracer	ויייין ו	iity iid ilitv of	.,		>	-		::		nes w
	Shaheed Benazirabad	cted	en if th		ines w			o the				ed at t	o autc		) Muu	) b b i	vailab	2		>	-		level		nedici
	KHI Malir	condu	ty. Eve		medic			nd als				as note	was n		fill cu	+ + + + + + + + + + + + + + + + + + + +	thea	2		>	-		lowing		uired n
믹	<u>Т</u> рэгрэгкэг	ment	n facili		these			oasis a				tus wa	There		in the	)	Jodn 7	2		>	_		he fol	level.	e requ
Sindh	пьи' МТ	asses	healt		tus of			nthly				out sta	ouse.		papil	חחת	ouse, ending	5		>	-		ers at t	It is more related to the district level.	get, th
	<b>2</b> пккиг	acility	of the	out.	ut sta			om uc				tock	wareh		ot inc		waler deb	2 ,		>	-		anage	the d	e bud
	Kashmore	alth f	ment	stock	ocks o			JEAS (				on of s	entral		n ole s	1 til til	guire	5		>	-		ors/m	ted to	e of th
	IHdd	4	assess	considered as stock out.	Mainly, the st							rmatio	om ce		The Medicines		e: if re	:		>	-		pervis	e rela	On the release
	SHI	licato	e of	ısideı	inly,			Yes, through				e info	ued fi		Mor	ייי איני איני ליי	rchas	5		>	_		ns ƙq	s mor	the r
	HANDS	in	tin	00	Ĕ			Ϋ́				느	iss		H		- I	-		>	_		ndled	Ξ	o
	LSAT Marks																		1				es har		
	Indicators	respected at all levels so	stock levels generally	fall between maximum	and minimum?	a. Are stock levels	(maximum and	minimum) for full supply	products reviewed	periodically?	b. Do reviews take into	account changes in	transport and	information availability?	How are products that	cannot be maintained in	full supply allocated at	different levels:	Are there written	provisions for the	redistribution of over-	stocked supplies?	How are stock imbalances handled by supervisors/managers at the following levels:	b. regional?	c. district?
						2									9				7				8		

	ATAŦ	pət		>	>	the	>	>	>
	Kb	มทรนc		>	>	ions, t	>	٨	>
	Baluchistan	tock c		>	>	situat	<b>&gt;</b>	٨	>
	DHŒ	For the medicines required, the medicines requisition has been prepared showing the stock in hand, stock consumed		>	>	In some places, the issue of expired drugs has been shared by the informants, while for the rest of the situations, the products do not expire due to procurement of long expiry medicines.	٨	Υ	>
	ІВМИСН & ИР	ock in l		>	>-	he rest	>	Υ	>
Punjab	Rajanpur	the st		>	>-	le for t	<b>\</b>	γ	>
Pui	pakpattan	owing		>	>	ts, whi	٨	٨	>
	Bahawalnagar	ared sh		>	>	orman	Υ	Υ	<b>\</b>
	Muzəffərghər	preρ		>	>	the inf	>	٨	>
	рно	as beer		>	>	In some places, the issue of expired drugs has been shared by the inf products do not expire due to procurement of long expiry medicines	λ	Y	>-
	margonal Program	ion h		>	>	n shar g expi	λ	Y	>
	Shaheed Benazirabad	equisit		>	>	as beel of lon	γ	γ	٨
	KHI Malir	cines r		>	>	rugs h ement	λ	λ	>
qþ	Тһаграгкаг	medi		>	>	ired d	٨	γ	>
Sindh	пь Кһап	d, the		>	>	of exp ue to p	>	>	>
	2nкkur	equire	ed.	>	>	issue Dire du	γ	٨	>
	Каѕһтоге	sines r	and quantity required	>	>	ss, the	>	<b>\</b>	>
	IHdd	medic	intity	>	>	place:	<b>&gt;</b>	<b>\</b>	>
	SHI	· the	a dua	>	>	some	γ	Υ	>
	HANDS	Fol	au	>	>	ln s prc	>	>	>
	LSAT Marks			4	H		0.33	0.33	0.33
	Indicators	d. service delivery	points?	Does the program have a policy of storing and issuing stock according to first-to-expire, first-out (FEFO) inventory control procedures at	In practice, does the program manage and issue stock according to FEFO inventory control procedures at all levels? Describe.	Are damaged/expired products physically separated from inventory and removed from stock records at the following levels:	b. regional?	c. district?	d. service delivery point?
				6	10	11			

	ATAŦ							>			es	ove		s on			Jo c		mo					
	Kb							>			ssol p	o impr		epend			eratior		nes) fi					
	Baluchistan							>			ged an	ions to		evel d			onside	le the	nedici					
	рног							>			The government system has the provision of damage and adjustment but number of reports of damaged and losses	were not reported apparently to avoid the investigations. Due to less reporting the system has limitations to improve		The District Level: The district implements the consumption based method of forecasting. The order level depends on			Service delivery Level: The resupply quantities are calculated consumption based methodology (not consideration of	all the WHO recommendations) The health facilities with PPP receive the medicines in 2 to 3 days while the	ealth facilities when required collect the medicines (depending upon the availability of medicines) from					
	ІВМИСН & ИР							>			orts of	em has		ig. The			golopc	to 3 d	availabi					
Punjab	Rajanpur							>			of re	e syst		ecastir			meth.	es in 2	n the					
Pul	bakpattan							>			umber	ing th		of fore			based	edicin	odn B					
	Bahawalnagar							>			but n	report		ethod			ption	the m	oendin					
	Nuzaffarghar							>			stment	to less		m pasi			onsum.	eceive	es (de			able.		
	рно	113						>			d adju	s. Due		tion ba	ند		lated	י אשא ר	nedicin			elow t		
	mergonal Program	12 and 13						>			ıge an	gation		dunsı	ndgei		calcu	es with	the n			ed in k		
	Shaheed Benazirabad	s been mentioned below tables 11,						>			of dama	investig		the cor	the demand of health facilities and availability of budget.		ties are	tacilitie	collect			stock out status have been mentioned in below table.		
	KHI Malir	v tabl						>			sion o	d the		ents	ailabi		Juanti	ealth	quired			en m		
qþ	Тһаграгкаг	l belo						>			provi	o avoi		nplen	and av		o /ldd	lhe	en rec			ave be		
Sindh	ТМ Кһап	tionec						>			as the	intly to		trict i	lities a		e resu	itions)	es wh			atus h		
	2nққп <sub>с</sub>	men.						>			tem h	ppare		he dis	th faci		<b>∙el:</b> Th	nenda	faciliti			out st		
	қазµшоке							>			ent sys	orted a	ions	evel: T	fheal		ry Lev	ecomi	ealth			stock		
	IHdd	The details ha						>			ernme	ot repo	in such situati	trict L	and o		delive	VHO	government h district.			Details of the		
	SHI	ne det						>			ne gov	ere nc	such	ne Dis	e den		rvice	l the V	governr district.			etails (		
	LSAT Marks	Ė						<u>&gt;</u>			È	<u> </u>	ij	F	<del>+</del>		Ϋ́ ·	<del>o</del>	<u>a</u>			Δ		
	3/1/2001/031					1																		
	Indicators	Note the approximate	quantities of products	that expired within the	past two years.	13. Does the program	have a system for	tracking product losses	and other	adjustments?	a. Are there significant	losses and	adjustments?	How does each level of	the system calculate	resupply quantities?				Have stock outs	occurred for any	product in the last 12	months at the	following levels:
		12				13					14			15						16				

	ATA3		and		<b>&gt;</b>		et.	nds						
	КР		ırrhea ea anı		>	pa	gpnq	: depe	به		ugno	the		the
	netzihouleB		of Dia diarrh		>	hand	mited	icts. It	age th		or thr	ceivec		ng on
	рнд		nerapy of the		>	can be	P has li	ne distr	A man		house	not re		ependi
	ІВМИСН & ИР		under consideration (Amoxicillin suspension, ORS, Zinc syrup) are the first line therapy of Diarrhea and e Stock outs of these medicines were directly affecting the treatment protocols of the diarrhea and		<b>\</b>	acilities with DDO powers or under the supervision of PPP, the emergency order can be handled	government health facilities through LP and PPP with immediate supplies). The LP has limited budget.	ed to th	ability of medicines at the central warehouse. HF level of KP Baluchistan and FATA manage the		ct ware	IHS has		e day d
Punjab	Rajanpur		the firs ent pro		>	ergency	(səilddr	re plac	ıistan a		e distri	cause		e same
<u>م</u>	pakpattan	le.	o) are reatm		>	e eme	ate su	der, a	3aluch		by th	ock be		on th
	Bahawalnagar	ng tab	syruk the t		>	PP, th	nmedi	ncy or	of KP I		ndled	the st		issuec
	nedgreffezuM	ollowir	S, Zind ecting		>	n of P	with in	nergei	level		ere ha	eived		ks are
	рно	of the stock out has been shared in detail in the following table.	on, OR ectly af		>	oervisio	д РРР	the er	use. HF		ities w	not rec		e, stoc
	mergora lenoiteN	etail i	spensi e dire		>	ne sup	LP an	nse to	ırehoı	ion.	h facil	haveı	ines.	t offic
	Shaheed Benazirabad	d in d	lin sus		>	nder t	rough	respo	ral wa	quisit	healt	ss IHS	medic	distric
	KHI Malir	share	noxicil	ı â	>	s or ui	ties th	lity in	e cent	nes re	lers of	acilitie	of the	o the (
<b>4</b>	Тһаграгкаг	s been	ion (An	children under five years.	>	power	n facilii	lth faci	s at th	medici	ncy ord	ealth f	ment (	sent to
Sindh	TM Khan	out ha	iderat s of th	der fiv	>-	ogg '	healt	ie hea	dicine	ough	nergei	The h	rocure	tion is
	Зиккиг	stock	r cons	ren un	>	es with	nment	d to th	/ of me	res th	the er	nents.	r the p	requisi
	Kashmore	of the	s unde he Sto		>			s issue	lability	ocedu	ANDs,	ocurei	get fo	cines
	IHdd S H I	The situation	The medicines under consideration (Amoxicillin suspension, ORS, Zinc syrup) are the first line therapy of Diarrhea a Pneumonia. The Stock outs of these medicines were directly affecting the treatment protocols of the diarrhea and	pneumonia of	>	In the health f	effectively (in	The medicines issued to the health facility in response to the emergency order, are placed to the districts. It depends	upon the avail	emergency procedures through medicines requisition.	In PPHI and HANDs, the emergency orders of health facilities were handled by the district warehouse or through	immediate procurements. The health facilities IHS have not received the stock because IHS has not received the	allocated budget for the procurement of the medicines.	<b>Sindh</b> : if medicines requisition is sent to the district office, stocks are issued on the same day depending on the
	SUNAH	he sit	he me	neum	<b>&gt;</b>	n the l	ffectiv	he me	ipon t	:merg	n PPH	mmed	llocat	indh:
	LSAT Marks			<u> </u>		_	Ψ				_	<u></u>	10	0,
	Indicators	a. Which products stock out most frequently? How long, and causes?	How did the stock outs affect program services and performance	(specify which products and levels)?	19. Are there established procedures	for placing emergency	orders? Yes No Comments:				a. How often are	emergency orders	levels (include	product):
		17	18		19						20			

	ATAŦ	eg.	SSe		쑹	der	a)		ey	
	Kb	neetin	proc		he sto	ncy or	ys. The		ıre, th	
	netsidouleB	nthly r	s. This		ffice. T	merge	e 3 da		nufactı	
	DHŒ	in mo	upplie		trict o	ndles e	nay tak		he mai	
	ІВМИСН & ИР	P: through LHS, the report to the District Coordinator, later he supplied the stock in monthly meeting.	In case if unavailability of the medicines, the regional level office are requested for medicines supplies. This process	HFs.	Punjab: In the case of emergency the order (medicines requisition) is directly placed to the District office. The stock	e same day, depending on the availability of the stock. IRMNCH & NP Punjab handles emergency order	igh courier service. Total time taken from placing an order to receiving of order may take 3 days. The		In tertiary care hospitals, if medicines are in central rate list and the order has been placed to the manufacture, they	nes.
Punjab	Rajanpur	olied th	or med	is completed within2 to 3 days. PPP provides the required medicines with in24 hours to HFs.	aced to	NP Pur	ing of		en plac	e the medicines form the LP. The delays from the manufacture creates issues.
7	bakbattan	dns ə	sted fo	n24 hc	ctly pla	GH &	recei		has be	re cre
	Bahawalnagar	later h	reque	with	is dire	IRM	der to		order	ufactu
	nedgreffezuM	nator,	ce are	dicines	ition)	stock.	g an or		d the	e man
	рно	Coordi	/el offi	ed med	requis	of the	placing		list ar	om th
	Mational Program	trict (	nalle	equire	cines	bility	from	red.	l rate	lays fr
	Shaheed Benazirabad	e Dis	egior	the re	medi	availa	aken	onito	entra	e del
	KHI Malir	to th	the	ides	der (	the	me t	oe m	e in c	<u>-</u> . ∓
		eport	cines,	, pro	he or	ng on	otal ti	also l	es ar	the l
Sindh	Тһаграгкаг	the r	medi	. PPF	ency t	endi	ce. To	plno	dicin	form
Si	ТМ Кһап	LHS,	the	3 days	nerge	, dep	servi	am sh	if me	cines
	Зпккиг	ugno	lity of	2 to 3	of er	ıe da)	urier	syste	itals,	medi
	Kashmore	մP։ thr	vailabi	within	e case	ne sam	os ygn	efficiency of courier system should also be monitored.	dsoų a.	re the
	IHdd	availability. N	funa	leted	In th	is issued on th	of LHWs throu	cy of c	ry car	cannot procur
	SHI	ailabi	case i	dmo	njab:	ssnec	LHW	icien	tertia	nnot
	SQNAH	avi	Ē	is (	Pu	isi	of	eff	드	cal
	LSAT Marks									
	Indicators								b. How successfully are	emergency orders filled for the following levels?

1.8 Section VIII: Warehousing and Storage

	ATAŦ	z	>		>	>-				pu	
	Kb	z	<b>\</b>		>	>		ilities	se to	per a	
	netzidoule8	Z	<b>*</b>		<b>&gt;</b>	>		th fac	ehous	re kee	
	DHŒ	^	٨			>		heal	l war	e sto	
	ІВМИСН & NP	٨	٨		7	z <sub>d</sub>	٨	ed at	incia	is th	
jab	Rajanpur	>	>	els:	>	>	>	S plac	n Prov	stock	
Punjab	bakbattan	>	>	ng lev	>	>	>	of LH	s fron	lian of	<b>(</b> S.
	Bahawalnagar	>	>	llowi	>	>	>	stock	move	ustod	stock
	Nuzaffarghar	Α	Υ	he fo	<b>\</b>	<b>&gt;</b>	Υ	sical	ectly	the c	ysical
	рно	Z	Y	es at t	^	l		e phy	ks dir	n HE,	ne ph
	margonal Program	٨	γ	inventory of all products annually at storage facilities at the following levels:	<b>&gt;</b>	>	٨	LHW program Sindh: The District coordinator check the physical stock of LHS placed at health facilities	during his/her visit. IRMNCH & NP Punjab: As the stocks directly moves from Provincial warehouse to	LHW. Then there is no physical stock at district level. In HF, the custodian of stock is the store keeper and	e In-charge of health facility, they randomly verify the physical stocks.
	bederizen98 b994ed2	z	>	rage f	>	>	>	or che	As the	trict le	mly ve
	KHI Malir	z	>	at sto	>	>	>	rdinat	njab:	at dis	andoı
	Тһаграгкаг	z	>	nally	>	>	>	t coo	VP Pu	stock	:hey r
Sindh	TM Khan	Z	Å	ts ann	٨	<b>\</b>	٨	Distric	CH & I	/sical	cility, 1
	Znkkur	z	٨	oqnc.	>	>	>	: The	RMN	hd οι	lth fa
	Kashmore	z	Y	all pr	<b>&gt;</b>	<b>&gt;</b>	>	Sindh	visit.	re is r	of hea
	lHdd	<b>\</b>	<b>\</b>	ory of	>	>	>	gram	s/her	en the	arge c
	SHI	*	٨	nvent	<b>\</b>	>	>	N pro	ing hi	۸. The	In-ch
	SQNAH	>	>		>	>	>	H	dur	H	the
	Marks	П	1	e phy	0.33	0.33	0.33				
	Indicators	1 Does the program have written guidelines for storage and handling of all products, at all levels of the system (e.g., manuals, posters, etc.)?	2 Are there written guidelines for disposal of sharps, bio-hazardous material, and other medical waste?	3 Does the program conduct at least one physical	b. regional?	c. district?	d. service delivery point?				

	ATAŦ	:he	رة.				10		٦٤,								z	z
	Kb	PI 9, t	etanus		or the		es ILR		roon								z	z
	Baluchistan	a. In E	тв, те	under	ions f		acilitie		chair			s etc.					z	z
	рна	moni	ieria,	also	ondit		alth fa		s cold			sheet					z	z
	ІВМИСН & ИР	buen	iphth	s was	age c		At he		clude			gol e					>	z
ab	Rajanpur	and	les, D	a viru:	e stor		vels. ,		nis in			rature					z	z
Punjab	bakbattan	arrhea	Meas	or Rota	es. Th		rict le		els. Tł ooxes.			empe					z	z
	Bahawalnagar	of Di	ıgitis,	ine fo	accin		d dist		all lev rrier b			ers, t					z	z
	Muzaffarghar	oach.	Menir	vacc	v bər		ial an		le at a ne ca			omet				els:	z	Υ
	рно	appr	p-B, <sub>l</sub>	). The	entior		ovinc		ailabl			herm				ng lev	z	z
	margonal IsnoitaM	entive	о, Не	virus	ve m	nes.	he pr		ere av and			with t	only.			llowii	z	z
	bedarizena8 baahad2	preve	d (Poli	o Rota	ie abo	nedicii	le at t		nes we			pədd ۱	rage (			products at the following levels:	z	z
	KHI Malir	or the	ludec	due to	for th	ine n	/ailab		vaccir ts, ice			equi	es stc			ts at	z	z
	Тһаграгкаг	sed fo	ere inc	rhea c	uired	e rout	ere a\		s for v			re not	accin			roduc	z	z
Sindh	ТМ Кһап	n uəəc	ses we	le diar	is req	han th	oms w		source			ed we	r the v				z	z
	Sukkur	has	disea	s whi	chain	tter t	in ro		ge re			rovid	ble fo			antiti	z	z
	Kashmore	accine	table	rtussi	cold	ch be	ld cha		stora for t			ator p	availa			nt qu	z	z
	lHdd	Sindh, the vaccine has been used for the preventive approach of Diarrhea and pneumonia. In EPI 9, the	ccine preventable diseases were included (Polio, Hep-B, Meningitis, Measles, Diphtheria, TB, Tetanus,	eumonia, pertussis while diarrhea due to Rota virus). The vaccine for Rota virus was also under	discussion. The cold chain is required for the above mentioned vaccines. The storage conditions for the	ccine are much better than the routine medicines.	Punjab: The cold chain rooms were available at the provincial and district levels. At health facilities ILRs	were provided.	he cold chain storage resources for vaccines were available at all levels. This includes cold chain rooms, ecial vehicles for transportation, ILRs, ice packs and vaccine carrier boxes.			the refrigerator provided were not equipped with thermometers, temperature log sheets etc.	idelines are available for the vaccines storage only.			dle the current quantities of	>	>
	SHI	indh,	cine p	nmor	ussio	cine a	jab:	e pro	cold			he re	Jeline			le the	>	>
	SQNAH	ln S	vacc	Pne	disc	vac	Pun	wer	The			All t	guic				<b>\</b>	>
	Marks															ate to	0.33	0.33
	Indicators	Are there cold chain requirements	in this supply chain?						Are cold chain storage resources (e.g., refrigerator,	temperature chart) available at all	levels of the system, where appropriate?	How is the cold chain monitored to	ensure that products are	appropriate temperatures? (Check	all that apply.)	Is the existing storage capacity adequate to han	a. regional?	b. district?
		4							5			9				7		

	ATAŦ	Z		aple			the			=						
	Kb	z	The central warehouses: The existing storage capacity is insufficient to handle the required medicines.	e purpose build warehouses (warehouse that meet all the standards / requirements) were not available the districts assessed. The stocks were also placed in extra room. corridors, garage etc. Whereas.	has		Health facilities have insufficient spaces especially for DHQs and THQs. The storage space provided to the		<del>;</del> ;	Sindh: The health department of Sindh, has planned to construct a warehouse at each division that will						
	Baluchistan	Z	d mec	re noi Where	ies. It		provid		distric	sion t		istrict				
	DHŒ	z	quire	s) we	laan	<u>_</u> <u>_</u>	ace l		each	n divi		the d				
	ІВМИСН & ИР	٨	e re	nent age (	o o		ge sp		e in	t eac		d at				
jab	Rajanpur	z	idle th	quirer rs. gai	nenc	_	stora		ehous	use a		rovide	AC.			
Punjab	pakpattan	z	to har	Is / re orrido	e frec		s. The		d war	areho		een pr	thout			
	Bahawalnagar	z	ient 1	ndard m. cc	in th		THO		lind e	t a w		as be	till wi			
	Nuzaffarghar	Z	suffic	e star G roo	rease		s and		ırpose	ıstruc		(AC)	el is s	lets		
	рно	Ν	y is in	all th n extr	e inc		DHQ		ae br	o cor		tion	y lev	d pal		
	margonal Program	Ν	pacit	meet iced ii	e to th	pace.	Ily for		truct	ned t		regula	facilit	cks an		
	Shaheed Benazirabad	Ν	age ca	that so pla	e, du	ables	pecia		cons	s plar		ature	ealth	ing ra		
	KHI Malir	Z	stor	າouse ere a	t spac	avail	ses es		ing to	Jh, ha		npera	the h	nclud		
	Тһаграгкаг	z	kisting	warei cks w	ficien	in the	t spac	٦t.	plann	of Sinc	es.	he ter	while	ture i		
Sindh	ТМ Кһап	Z	The e.	The purpose build warehouses (warehouse that meet all the standards / requirements) were not av In the districts assessed. The stocks were also placed in extra room, corridors, garage etc. Whereas.	warehouses of the PPP have sufficient space. due to the increase in the frequency of supplies. It has	increased to manage the stocks in the available space.	fficien	RHCs and BHUs is also insufficient.	Yes, the government of Sindh is planning to construct ae purpose build warehouse in each district.	nent (	facilitate the storage of medicines.	Punjab: The infrastructure for the temperature regulation (AC) has been provided at the district	medicines storage warehouses, while the health facility level is still without AC	Storage temperature, infrastructure including racks and pallets		
	<b>2</b> пккиг	z	uses:	areno sed. T	PP ha	thes	insu	o insu	of Sir	partr	of m	uctur	areho	, infr		
	Kashmore	z	areho	asses	the P	anage	s have	s is als	ıment	alth de	orage	frastr	age w	rature		
	lHdd	Ν	ral w	ose bi tricts	ses of	to m	cilitie	BHU	goverr	he he	the st	The in	s stor	empe		
	SHI	z	cent	purp e dis	noqe	eased	Ith fa	s anc	the g	lh:⊤	itate	jab:	licine	age t		
	SQNAH	z	The	in th	War	incre	Hea	RHC	Yes,	Sino	facil	Pun	mec	Stor		
	Marks	0.33														
	Indicators	c. service delivery point?	Can the existing storage capacity handle all the quantities needed to	ensure that no stock outs occur at the different levels?	How does the program cope with	inadequate storage space at the different levels:			Does the program have plans for meeting storage requirements for at least the next five years?	Describe the program's plans for	accommodating growth (e.g., infrastructure, distribution, etc.).			12. Specify storage conditions that	ovement,	cleanliness, organization, temperature, building structure,
			∞		6				10	11				12		

	ATAŦ			Si			>			z		-:						>	>
	КР			dicine			>			>		burie	the					<b>×</b>	>
	netsidoulea		the t	ed me			>			z		t and	SOPs					<b>\</b>	>
	DHŒ		up to	uppli			>			z		burn	ig to						>
	ІВМИСН & ИР		e not	the s			1	z	NA	1		were	ordir					<b>\</b>	>
ab	Rajanpur		s wer	nt. If			>	>	z	z		nges	el, acc					>	>
Punjab	pakpattan		Product quality complains can be recorded at any level. If supplied medicines were not up to the	standards (labeling) they are returned to the supplier and get the replacement. If the supplied medicines	ons.	S:	<b>\</b>	>	z	z		expiry of the product is rarely reported while the used vials, cartons syringes were burnt and buried.	e incinerators are not available in all health facilities. At the provincial level, according to SOPs the					٨	>
	Bahawalnagar		am pa	e repl	l actic	level	>	٨	z	Ν		carto	ovinc					>	>
	Nuzaffarghar		upplie	et the	e lega	wing	>	Υ	z	Z		vials,	he pr					<b>\</b>	<b>X</b>
	рно		I. If s	and g	n tak	e follo	<b>\</b>					pesn	s. At t					٨	
	Mational Program		y leve	plier	ent ca	at th	>	z	na			e the	cilitie	tors.				>	>
	bederizena8 baahed2		at an	Je sup	ernme	acility	>	<b>\</b>	<b>\</b>	γ		l while	lth fa	sinera				>	>
	KHI Malir		orded	to th	s gov	age f	>	0	z	z		ortec	II hea	ng in				>	>
	Тһаграгкаг		e reco	urnec	drug	e stor	<b>&gt;</b>	<b>&gt;</b>	z	z		ly rep	e in a	d, usi				<b>\</b>	<b>\</b>
Sindh	ТМ Кһап		can b	ire ret	urious	at th	>	z	z	z		is rare	vailab	stroye				<b>\</b>	<b>\</b>
	Sukkur		olains	hey a	ce, sp	lucted	<b>\</b>	z	z	z		duct	not a	re de				<b>\</b>	٨
	Kashmore		comp	ling) 1	ue, lii	conc	>	z	z	z		e pro	s are	ne we				<b>&gt;</b>	<b>\</b>
	lHdd		qualitγ	s (labe	ve quality issue, like, spurious drugs government can take legal actions.	is of products conducted at the storage facility at the following levels:	<b>&gt;</b>	<b>&gt;</b>	<b>\</b>	Υ		y of th	erator	pired medicine were destroyed, using incinerators.				<b>&gt;</b>	<b>&gt;</b>
	SHI		duct (	dard	e dna	of pr	<b>&gt;</b>	٨	γ	γ		expir	incin	red n				<b>\</b>	<b>\</b>
	SQNAH		Pro	stan	have	tions	>	<b>&gt;</b>	>	٨		ayı	The	expi				>	>
	Marks					inspec	0.33	0.33	0.33	1								0.33	0.33
	Indicators	etc.).	a. Is there a procedure for	recording complaints about product quality at all levels?	b. If yes, how are they handled?	14. Are visual / lab quality assurance inspection	Regional?	District?	Service delivery point?	Are there written procedures or	guidelines for destroying damaged and expired products?	Describe the written	procedures/guidelines for destroying damaged and expired	products.	In practice, are damaged and	expired products destroyed	guidelines at the following levels:	b. regional?	c. district?
			13			14				15		16			17				

ATA	z	ndh nd was
КЬ	z	the Sii blic a nittee and
Baluchistan	z	nent i at pu comm ublic sub
DHŒ		npler /ater . the . fall p
<b>ІВМИСН &amp; ИР</b>	z	to ir king v ment, ans o'
Rajanpur	z	The <b>Sindh</b> Health Department, constituted a seven-member provincial committee to implement the Sindh Hospital Waste Management Rules 2014 and to ensure the provision of safe drinking water at public and private hospitals in the province. According to a notification by the health department, the committee was formed to formulate a strategy and to implement hospital waste management plans of all public and private hospital in the province in the light of the rules. The panel will supervise the district sub committees for the implementation of the hospital waste management rules.
pakpattan	z	I com of saft alth d agem supei
Bahawalnagar	z	vincia ision ( he he man; man;
Muzaffarghar	Ν	r provi provi by tl waste yane
рно		e the cation pital?
margor9 lanoitaN		en-me ensur notifii nt hos e rules
bederizena8 baahed2	z	ne <b>Sindh</b> Health Department, constituted a seven-member provincial commiospital Waste Management Rules 2014 and to ensure the provision of safe convision of safe convision of safe convision waste Managemen ivate hospitals in the province. According to a notification by the health deprimed to formulate a strategy and to implement hospital waste managemen ivate hospital in the province in the light of the rules. The panel will supervinmittees for the implementation of the hospital waste management rules.
KHI Malir	z	ituted 014 a ordin; o imp e light
Тһаграгкаг	z	const ules 2 e. Acc and t in the
ТМ Кһап	z	nent, lent R ovinc ategy vince
Sukkur	z	epartr iagem the pr e a str ne pro
Kashmore	z	e Mar e Mar als in i nulate nulate
IHdd	<b>\</b>	h Hea Wast ospita o forr ospita
SHI	<b>\</b>	Sind pital ate h ned t ate h
SUNAH	γ	The Hos priv forr priv
Marks	0.33	
Indicators	d. service delivery point?	Hospital waste management practices in the Sindh
	Marks  Mathon  Mational Program  Mational Progra	OHQS  HANDS  Tharparkar  Sukkur  Sukkur  Tharparkar  Sukkur  Sukhan  Sukkur  Sukkur  Sukkur  HANDS  HANDS  HANDS  HANDS

1.9 Section IX: Transportation / Distribution

	ATAŦ							>	-				>	ese			
	Kb	hen a	066	ביי				>	-	4	ב		>	es. Th			rles.
	nstsidoulsd	<b>But when</b>	<u>+</u>	עמור				>	-	2	טט טטי		<b>\</b>	edicin			schedı
	DHŒ	able.	<u> </u>	וונו				>	-	+110	กรเลก		٨	n of m			ne set
	ІВМИСН & ИР	t avail		ב ע				>	-	=	ב ב ע		٨	bution		ervice.	g to th
ab	Rajanpur	ere no	3	JIG DI				_		2	2			distr		rier se	cordin
Punjab	bakpattan	ion w	; ;	אל כו זכ				^		7.5	מווחבת		۸ ۸	or the		gh cou	t is ac
	Bahawalnagar	in the government designated vehicle, used for the medicines distribution were not available.	4	private vernicie is all'anged for the distribution of medicines and the cost is paid by the district health office.						200	orderunies for the transportation of vaccines has been clearly described and well understood by the		\ \	In the districts of Sindh and Punjab, a proper schedules is prepared for the distribution of medicines. These	use.	RMNCH & NP program, in Punjab, is now distributing medicines through courier service.	In <b>DHQ,</b> the distribution of medicines is by the sub-pharmacies and that is according to the set schedules.
	nedgreffezuM	ines di	9	2 0 1 1				>	-	2	כוע		>	is prep	schedules were helpful in managing the workload of the warehouse.	dicines	acies a
	рно	nedic	<u></u>					>	-	4	בי המ		>	anles	the w	g me	harm
	margor9 lenoiteM	r the I	40	ב ב				>	-	, ,	ב ב ב		>	sche	ad of	ibutin	d-qns
	bederizena8 baahed2	ed fo	-					>	-		   		>	roper	vorklo	/ distr	y the
	KHI Malir	cle, us	<u> </u>					^	-	20	5		Υ	ь, а р	g the \	is nov	es is k
<b>-</b>	Тһаграгкаг	l vehi	, 4	ב				>	-	+	טו נפר		Υ	Punja	naging	njab,	ədicin
Sindh	ТМ Кһап	nated	, 1	בות בות				>	-	2	ק בושי		<b>\</b>	and	n mai	in Pu	of m
	Sukkur	desig	2	20 20				^	-	+ - -	ב		٨	Sindh	i Infdi	gram,	ution
	КаѕҺтоге	ment		ם <u>כ</u>				>	-	5		iers.	<b>\</b>	ts of !	re he	P prog	listrib
	IHdd	overn	<u>.</u>	עו				>	-	-	redui.	sei vice providers.	<b>\</b>	istric	es we	⊗ ⊗	the c
	SHI	he go	÷ ;	מפום				>	-	2		- NC	<b>\</b>	the d	edule	ANC.	ЭНQ,
	SQNAH	In t	2	5				>	-		- 6	as Sel	<b>\</b>	<u>-</u>	sch	R	<u></u>
	Marks							1					1				
	Indicators	How are products delivered	between each level of the	system (include frequency and	means of transportation)?	Specify between which levels.	How are routes determined?	Do written procedures specify	what type of distribution	system should be used to	distribute products between	each level?	3. Is there a documented distribution schedule for all	levels?			
		1						2					3				

		qe						z	z	z			_		>		es is nent	n of	2	o <u>≻</u>
	Kb	epen				on		z	z	Z					<b>\</b>		of medicines is No permanent	distribution	2	Supp
	netsidoulea	ere d				ributi		z	z	Z					<b>&gt;</b>		of me No p	distri	- - - - -	ב ב
	рнаг	ines w				ıct dist		na					na	na	na		oution nent.	plies,	2	IICILIES
	ІВМИСН & ИР	medic				produ		>	1						1		distrik lepartı	i nt sup		า เมคา
ab	Rajanpur	on of				sired		z	z	z				z	>		. The alth c	urgei	2	
Punjab	pakpattan	ributi				the de		z	N	z	els.			z	7		oution in he	t for	<u>:</u> :: ::	Stribu
	Bahawalnagar	The distribution of medicines were depended				o meet 1		z	z	z	In PPP, the vehicles are provided with POL for the supervision at all levels.			z	<b>\</b>		Districts do not have budget for the vehicles and medicines distribution. The distribution of medicines is e through rented vehicle or through any vehicle which is available in health department. No permanent	The ongoing system was not efficient for urgent supplies,	etc.	NP has made contract with a counter company for the distribution of medicines. The supply of
	Muzaffarghar	shed.				rels, to		z	z	Z	sion a			z	>		dicine th is a	not	medicines during emergencies, or during strikes of transporters etc.	ny ro
	рно	stablis				ate le		Na			upervi	5	na	na	na		nd me e whic	was.	ransp	Orriba
	margonal Program	vell e				ropri		٨			the su	200			>		cles ar rehicle	ysten	es of t	Lier
р	Shaheed Benaziraba	onot √				at app		z	z	Z	)L for	2	z	z	>	e e	vehic any v	ing s	strik	a cor
	KHI Malir	g was				vers, a		z	z	Ν	ith PC	2	z	z	>	ailabl	or the rough	ongo	during	MICI
드	Тһаграгкаг	concept of combo or co-packing was not well established.				nd dri		z	z	Z	PP, the vehicles are provided with POL for the super	5	z	z	>	organizational vehicle were available.	lget fo or thi	The	is, or (	าเรลด
Sindh	TM Khan	- 00 -	·:			rol a		z	z	z	provi	SIS:	z	z	>	cle w	e buc hicle	ged.	encie	e CCI
	2nkknr	nbo o	he stocks availability.			th pei		z	Z	z	s are	at the following levels:	z	z	<b>\</b>	l vehi	t hav ed ve	contractors were arranged.	merg	ınacı
	Kashmore	of cor	avail			le, wi		z	z	z	hicle	lowir	z	z	>	tiona	do nα rent	were	ring e	חש
	PPHI	cept (	tocks			ailab		>	>	Υ	he ve	le fol		>	>	aniza	ricts ough	ors \	np sa	Ø
_	SHI					es av		>	>	<b>\</b>	PP, t	at th		>	>	_		tract	dicine	INCH
	SQNAH	The	on t			ehicl		>	>	<b>\</b>	In P	duled		>	>	, ddd	The	CO	mec	_ ₹
	Marks					ning v		1.33	1.33	1.33		s sche	1.33	1.33	1.33					
	Indicators	Which essential health	products are distributed together (e.g., ORS and Zinc	suspension with essential	drugs, laboratory supplies, etc.)? Specify by level.	Are a sufficient number of functioning vehicles available, with petrol and drivers, at appropriate levels, to meet the desired product distribution	schedule?	b. regional?	c. district?	d. service delivery point?	Are vehicles regularly available	In general, are orders delivered as scheduled	b. regional?	c. district?	d. service delivery point?	a. Is transportation outsourced	at any level of the system? b. If yes, how effective has it	been:		
		4				2					9	7			•	8				

	ATAŦ	as					
	Kb	tment					
	Baluchistan	medicines through courier company is a new intervention in SCM. The medicines in Health department as					
	DHŒ	lealth					
	ІВМИСН & ИР	es in F					
jab	Rajanpur	dicine					
Punjab	bakbattan	he me		SS.			
	Bahawalnagar	CM. T		rograms have budget for logistics and transportation of medicines.			
	nedgreffezuM	n in S		n of m			
	рно	ventio		tatior			
	mergoral lenoiteM	inter	ctive.	Inspor			
	bederizena8 baahed2	new	discussed with LHS and LHWs will be very effective.	nd tra			
	KHI Malir	ny is a	e ver	stics a			
ų.	Тһаграгкаг	ompa	will k	ır logi			
Sindh	ТМ Кһап	rier c	LHW	get fc			
	Зпккиг	noo u	Sand	e bud			
	каѕһтоге	roug	th LH	ıs hav			
	IHdd	nes th	ed wi	ogran			
	SQNAH S H I	nedici	iscuss	The Pro			
	Marks	٦	ס	_			
	341514						
	Indicators			Does the program's budget	have a line item for vehicles,	fuel, maintenance, periderm	salaries for drivers etc.:
				6			

1.10 Section X: Organizational support for Logistics system

	ATAŦ			<b>&gt;</b>	pou						>	•		ir	
	КР			٨	and districts, it was observed that there were no routine meetings of the logistics staff, and the method		າg the				>	•		gs, the instructions in form of official letters from higher level to the lower level logistics staff, and their	
	Baluchistan			<b>\</b>	and th		ized healthcare hospitals were linked through online computerized software, which was updating the				>	-		staff, a	
	DHŒ			>	staff,		n was ı				4 2			gistics	
	ІВМИСН & ИР			>	ogistics		, whicl				>	•		evel lo	
Punjab	Rajanpur		<del>&gt;</del>	>	f the lo		ftware	basis.			>	•		owerl	
Pur	pakpattan		e 0.5=	>	tings o		zed so	onthly			>			o the l	
	Bahawalnagar		erwis	>	e mee		puteri	t on m			>			level t	
	Nuzaffarghar		om the next level below (e.g. district) (If never= $0 = N$ , otherwise $0.5=Y$ )	>	routin		ne com	time. Rest of the public health facilities submits its report on monthly basis.			>	•		nigher	
	рно		/er=0 =	>	ere no		h onlir	nits its	ties		۵			from	
	mergor9 lenoiteM		(If nev	>	ere we		throug	uqns s	Annually, every district submit its forecasted medicines quantities		>	•		letters	
	Shaheed Benazirabad		strict)	>	that th	orts.	inked 1	acilitie	icines		>	•		fficial	
	KHI Malir		(e.g. d	>	erved 1	is through official letters or reports.	were	ealth f	d med		>	•		m of o	
	Тһаграгкаг		oelow	>	as obs	letters	spitals	ublic h	ecaste		>	-		in for	
Sindh	ТМ Кһап	ıte?	level	>	s, it w	fficial	are hos	f the pi	its for		>	•		actions	
	<b>2</b> пққп <b>ւ</b>	communicate?	e next	>	district	o ugno	ealthca	Rest of	ubmit	elivery point	>			e instru	
	Kashmore		om th	>	s and o		ized he	time. I	strict s	leliver	>	•		ıgs, the	
	IHdd	g level	staff fı	<b>\</b>	In all the provinces	of communication	In <b>Punjab,</b> Speciali	stock level at real	/ery di	rvice c	>	•	on 3.	During the meetin	
	SHI	llowing	f with	<b>\</b>	the pr	mmun	njab, S	level	ally, e	the se	>		questi	g the I	
	SQNAH	the fo	ics staf	<b>\</b>	In all	ot co	In <b>Pu</b>	stock	Annu	ff with	>	•	skip to	Durir	
	LSAT Marks	ınel at	logisti	0.5						ics sta	2 0	)	1 a–c, s		
	indicators	How often do personnel at the following levels	b. The Regional-level logistics staff with staff fr	Never / Weekly /	Nontniy / Quarterly /	Annually				c. District-level logistics staff with the service d	Never / Weekly / Monthly /	Quarterly / Annually	If never to question 1 a–c, skip to question 3.	Describe what is	done in this
		1												2	

	ATAŦ		ere			lall (			рна	:he				z	Z	z	z
	Kb		isms w		online	oorts ir		si is	ist at l	ed by t		ibe		>	γ	0	z
	netsidoulea		release, medicines procurement plan, any new instruction, change in law or reporting mechanisms were			software of DHQ facilitate the inventory management in Punjab, the reports of stock out status shared in DHIS reports in all		facilities, apart from the external monitoring or reporting by MEAs, the health facility in-charge is	responsible for first level of supervision of all the logistics activities. Any report / document submitted by Pharmacist at DHQ	per from BHU or RHC is verified by the health facility incharge. The Vertical program is monitored by the		s descr		z	Ν	Z	Z
	DHŒ		rting r		nes an	ed in D		ility in	d by Pl	m is m		pleas		z	z	Z	Z
	ІВМИСН & ИР		r repo		Monitoring of tracer elements at BHUs and RHC through MEAs facilitate the physical count of medicines and the	ıs shar		Ith fac	bmitte	progra		If yes,		>	٨	>	z
Punjab	Rajanpur		law o		unt of	ıt statı		he hea	ent su	ertical		levelsî		z	Z	z	z
Pur	pakpattan		ange ir		ical co	ock ou		IEAs, t	docum	The V		owing		z	Z	z	z
	Bahawalnagar		on, ch		e phys	ts of st		g by N	port / (	harge.		he foll		z	Ν	z	z
	Nuzaffarghar		structi		ate th	repor		portin	Any re	ity inc		nel at t		z	Z	z	z
	рно		new in		s facilit	ab, the	acilitate the availability of the essential medicines.	g or re	/ities. /	th facil		ersonr		z	Ν	z	z
	margonal Program		ı, any ا		MEA:	ո Punja	ial me	nitorin	s activ	e heal		stics p		z	Z	z	z
	Shaheed Benazirabad		nt plar		hrough	nent ir	essent	nal mo	logistic	d by th		of logi		z	Z	z	z
	KHI Malir		ureme		RHC t	anager	of the	exterr	all the	/erifie		skills		z	Z	z	z
	Тһаграгкаг		s proc		Us and	ory ma	bility	ım the	on of	HC is \		ge and		z	Z	z	z
Sindh	ТМ Кһап	hared	dicine		at BH	invent	availa	oart fro	pervisi	IU or F		owlec		z	Z	z	z
	2nққп <b>ւ</b>	responsibilities was normally shared	ise, me	eeting.	ments	te the	ate the	ties, ap	l of su	om BF		the kr		z	Z	z	z
	қэгршоке	as nori		ine m	cer ele	facilita		r facilit	st leve	eper fr	ors.	gaps in		z	Z	z	z
	lHdd	ties wa	pndge	ne rout	of tra	рно	es will	healt	for fir	ore ke	rdinat	g any §		>	<b>\</b>	٨	<b>\</b>
	SHI	ilidisuc	Updates of budget	shared in the routine meeting	itoring	are of	the provinces will	In all public health	onsible	or to the store kee	District coordinato	provin		>	٨	٨	<b>\</b>
	SQNAH	respo	Upda	share	Mon	softw	the p	In all	respo	or to	Distr	forim		>	٨	>	<b>*</b>
	LSAT Marks											place		0.33	0.33	0.33	1
	indicators	communication?			Is there a	supervision system that covers	logistics activities?	ofte	supervision is conducted at the	service delivery	points?	Is there a process in place for improving any gaps in the knowledge and skills of logistics personnel at the following levels? If yes, please describe	process.	b. regional?	c. district?	d. service delivery point?	Are there written procedures and guidelines (e.g.,
					3			4				2					9

	ATAŦ				z	z	z	ng,			ے	
	Kb				z	z	Z	shelvi			ilable i	
	Baluchistan				z	z	z	lators,			district level are insufficient in size, lack of racks and pallets. The Air Conditioning facility is available in	
	DHŒ				Z	z	z	, calcu			facility	
	виисн & ир			els:	٨	γ	γ	і рареі			ioning	
jab	Rajanpur			ing lev	z	z	Z	carbon			Condit	
Punjab	bakbattan			follow	Z	Z	N	orms, (			ne Air	
	Bahawalnagar			at the	Z	N	Z	aids, f			lets. Tl	
	nedgreffezuM			oilities	Z	Ν	Z	g., job vels:			nd pal	
	рно			en job description that includes logistics responsibilities at the following levels:	z	z	Z	y need to do their jobs, at the following levels (e.g., jo tools or resources are missing at the following levels:			racks a	
	margonal Program		s s	tics re	^	^	>	ving lev e follov		MSD,	ack of	provinces are deprived from such facilities.
	Shaheed Benazirabad		not distributed at the health facility;	s logis	z	z	Z	follov g at th		Lack of storage conditions as mentioned in Baluchistan MSD,	size, l	uch fa
	KHI Malir		health	include	z	z	z	, at the missin		Baluch	ient ir	from s
	Тһаграгкаг		at the	ı that i	z	z	z	ir jobs <sub>.</sub> es are		ned in	nsuffic	prived
Sindh	тМ Кһап		outed	ription	z	z	z	do the source		nentio	el are i	are de
	<b>2</b> пққпւ		t distril	op desc	z	z	z	ed to Is or re		ns as r	rict lev	vinces
	казһтоге		ere not	tten jo	z	z	z	they ne ch too		onditio		er prov
	IHdd		The guidelines were	e a wri	<b>&gt;</b>	>	>	urces t ot, whi	able	rage co	The warehouses at	Punjab while other
	SHI		guideli	es hav	>	>	>	d reso )? If no	Not applicable	of sto	wareh	ab whi
	SQNAH		The §	noditi	<b>\</b>	>	>	ols an t, etc.	Not a	Lack	The	Punj
	LSAT Marks			comr	0.33	0.33	0.33	the to anspor				
	indicators	manuals, job aids, standards) to help staff carry out their logistics responsibilities?	Are the procedures and guidelines distributed to staff at the following levels:	Do staff who manage commodities have a writt	b. regional?	c. district?	d. service delivery point?	Do logistics staff has the tools and resources they need to do their jobs, at the following levels (e.g., job aids, forms, carbon paper, calculators, shelving, vehicles, funds for transport, etc.)? If not, which tools or resources are missing at the following levels:	a. central?	b. regional?	c. district?	
			7	∞				6				

	ATAŦ	ties.		/ery						z					9	2				z					
	Kb	quanti		us of \	4	ic.				Z		more			÷	בפוע				z					
	Baluchistan	icient		ck stat	-	ratus e				z		gives			4	2				z					
	DHŒ	in suff		he sto	1	TOCK S				z		sck list			÷:					z					
	ІВМИСН & ИР	vided		tting t		ines) s				Υ		or che								z					
jab	Rajanpur	not pro		h in ge	,	or vacc				z		plates			9	אם מחמבו				z					
Punjab	pakpattan	s are i		f healt		zation				z		he terr			+	נו				z					
	Bahawalnagar	nd rac		ment c	11111	n (utilli				Z		. But t			200					z					
	nedgreffezuM	The Pallets and racks are not provided in sufficient quantities.		The Monitoring and Evaluation Assistance (MEA) has facilitated the department of health in getting the stock status of very		essential medicines. UNICEF and WHO facilitate in monitoring of vaccination (utilization of vaccines) stock status etc.				Ν		In the job description the major responsibilities of the supervision are given. But the templates or check list gives more			No anidolizar ware available for the cusconicer that december him bow to conduct the cusconicer vicits. How to create two	3 4 6	<u>.</u>			z					
	рно	The Pa		d the	9	or vac				z		ion ar			<u>2</u> 2 2	+60:01	way communications.			z					
	margonal Program	icient.		cilitate		toring				λ		ıpervis			<u></u>		3			z					
	Shaheed Benazirabad	insuff	ر <u>،</u>	has fa		mom (				z		f the su			+ + -	וומר חב	۸۵ ۸۵			z		orage		status.	
	KHI Malir	of stores are insufficient.	dicines	(MEA)		ıtate ır				z		ities of			÷	1061				z		cine st		k out	
	Тһаграгкаг		of me	tance	-	O Tacil				z		onsibil			2	ndne:				z		of vac	cility	of stoc	
Sindh	ТМ Кһап	the size	ensing	n Assis	11/4/	M W H				z		or resp			for +b.	5				z		toring	alth fa	nation	
	<b>2</b> пққпւ	vels, th	ne disp	aluatio	, L	ICEF al				z		e majo	on.		2	ממ				z		e moni	oring of health facility	inforn	
	қэгршось	ı≔	And also the bags for the dispensing of medicines	and Eva	-	es. UN				z		tion th	description of supervision		ć	ם מ				z		Supervisory tools for the monitoring of vaccine storage	hitoring	DHIS indicators give the information of stock out status.	
	IHdd	Ith fac	e bag	oring a	:	edicin				Υ		lescrip	of sup		2	20				>		tools /	of mor	tors gi	
	SHI	At the health faci	also th	Monit	-0:1	ntial m				٨		e job c	ription		7	בו מחומ מחומ				>		rvison	MEAs tool of monit	indica	
	SQNAH	At t	And	The		esse				٨		In th	desc		2	2				>		Supe	MEA	DHIS	
	LSAT Marks									1						1				1					
	indicators	d. service delivery	point?	a. Is external	assistance (from other	donors,	partners) used to	management and	supervision activities?	Are supervisory	responsibilities	described in written	job descriptions?	Are guidelines	available for how	the supervisor is to	conduct the	supervisory visit	Are tools available	that describe what to	cover when	conducting a	supervisory visit	specifically for	logistics monitoring
										10				11					12						

	ATAŦ					>	>	<b>\</b>										
	КЬ					٨	γ	Y								ng the		
	netzihouleB					>	<b>&gt;</b>	٨								he department, can completely understand the limitations of the storage but staking / organizing the		
	DHŒ					na	na	Υ								ng / or		
	ІВМИСН & ИР					٨	γ	Y								ıt staki		
Punjab	Rajanpur					<b>\</b>	Υ	Y								age bu		ed.
Pun	pakpattan					>	<b>\</b>	Υ								ne stor		report
	Bahawalnagar					>	>	٨								ns of th		monly
	nedgreffezuM					>	>	<b>\</b>						on.		nitatio		as com
	рно					>	na	>			,			Normally, the time to submit the order was reported, in the discussion.		the lin		During the visits, the physical count of randomly selected product was commonly reported
	mational Program					na	na	<b>&gt;</b>			opic of discussion, either in visits or meetings.			the di		rstand	rs.	d proc
	Shaheed Benazirabad					>	>	<b>\</b>			ts or m			ted, in		nnde	erviso	selecte
	KHI Malir					>	>	<b>\</b>			in visi			repor		pletely	or sup	lomly :
	Тһаграгкаг					>	<b>\</b>	<b>&gt;</b>			either			er was		n com	isitors	of ranc
Sindh	ТМ Кһап				evels:	>	>	<b>\</b>			ussion,			he ord		ent, ca	y the ۱	count
	Зиккиг			se the tool.	wing l	>	>	٨			of discu			ıbmit t		partm	discussed by the visitors or supervisors.	ysical
	қэгµшоке			use the	e follo	>	>	<b>\</b>		visits:	1			e to su				the ph
	lHdd			Yes, supervisors u	ff at th	>	>	٨		ng the	It is the common			he tim		The visitors from t	products is mostly	visits,
	SHI		%	super	for sta	>	>	٨	1.	e durii	he cor			nally, t		visitors	ucts is	ng the
	SQNAH		tion 1	Yes,	ucted	>	>	٨	stion 2	ke plac	It is t			Norr		The	prod	Duri
	LSAT Marks	σ.	sanb o.		s cond	0.33	0.33	0.33	to que	ties tal								
	indicators	(e.g., guidelines, a checklist)?	If no to 13-15, skip to question 18.	Do the supervisors use these guidelines and tools?	Are supervisory visits conducted for staff at the following levels:	b. regional?	c. district?	d. service delivery point?	If no to 17 a-d, skip to question 21.	What types of activities take place during the	a. review	procedures for for forecasting peeds?	b. review	procedures for	ordering products?	c. observe product	storage?	d. conduct physical
				13	14					15								

	ATAŦ					a for	)	der	ing				ne	ъ				
	КР		iewed			are are	5	ies, ur	s to br				he iss	scnsse				
	Baluchistan		The review of the stock registers, daily expense register, bin cards, medicines requisition records, were always reviewed.			under the control of health facility staff and supervisor if it is considered as a negligence or the area for		these areas were shared and discussed in next visit. The supervisory visits at the health facilities, under	PP were more frequent, so the impact of any observation made during the previous visit, helps to bring				However, if the issue	was from the departmental side, empathic behavior was adopted. The issues, like, storage conditions etc. were discussed			gd	
	DHŒ		re alw		u.·	aligan	0	healt	ous vis				Howe	s etc. v			resolve	
	ІВМИСН & ИР		rds, we		the discussion on budgets was more among the provincial and district level staff.	ac a ne		at the	previe		visits.		rted.	ndition			Any help, like, requirement of the stock register, daily expense register, bin cards were immediately resolved.	
Punjab	Rajanpur		n recol		rict lev	dered	5	y visits	ing the		in the		as repo	age cor			immec	
Pur	pakpattan		uisitio		nd disti	consi		ervisor	de dur		nssed		vell wa	e, stora			were	
	Bahawalnagar		les red		ıcial ar	ı. if i	: :	ons əu	on ma		as disc		rking v	es, like			ı cards	
	Nuzaffarghar		nedicin		provir	prviso		isit. T	servati		explained or demonstrated within the limited time was discussed in the visits.		During the supervisory visits of the public health facilities, anything not working well was reported.	he issu			ter, bir	
	рно		ards, n		ng the	uls bu	<u>5</u> 5	next v	any ob:		nited t		thing r	oted. T			e regist	
	mational Program		, bin c		re amo	ctaff a		sed in	act of		the lir		es, any	ıs adop			xpens	
	Shaheed Benazirabad		egister		as mo	acility	,	discus	e imp	esses.	within		faciliti	/ior wa			daily e	
	VHI Malir		ense r		gets w	halth f	5	ed and	t, so th	e proc	trated		nealth	beha	ing.		gister,	
	Тһаграгкаг		ily exp		pnq u	olofh	) .	e share	edneu	t of th	suous		ublic	pathic	l meet		ock reg	
Sindh	тМ Кһап		ers, da		ssion c	contr		as wer	ore fr	'emen	d or de		f the p	de, em	th leve		the st	
	2пккиг		regist		discur	der the	;	se are	were m	impro	plaine		visits o	ntal si	during high level meeting.		ent of	
	Kashmore		e stock						f PPP \	more chances towards improvement of the processes.	e		visory	oartme			quiren	
	lHdd		of the		orted t	vhich		ent; th	ision c	ices to	hat cal		super	the de	r offici		ike, re	
	SHI		review		It was reported that	Anything which was	0	improvement; then	the supervision of P	e char	Anything that can b		ing the	from t	with higher officials		help, l	
	SQNAH		The		It w	Δ		imp	the	m or	Any		Dur	was	with		Any	
	LSAT Marks																	
	indicators	inventory?	e. review logistics records and	reports?	f. discuss budgeting for	g review changes	made since last	supervisory visit?			h. on-the-job training to improve	job performance?	i. discuss what is	working and what is not working?	)	j. discuss what help	is needed (staff,	equipment, forms, etc.)?

	ATAŦ					ed, if								cle				SE	)			
	Kb		ties.			report								of vehi			<u>&gt;</u>	nts w				
	Baluchistan		schedules, while in public sector of Sindh and Punjab, there were no schedules for health facilities.			The other scheduled visits were also reported, if								lb, the major constrain of conduction the supervisory visits is the limitations of HR, availability of vehicle			it was observed that the components of capacity building was not scientifically focused. It mostly.	inings organized by the NGOs. No periodic staff development program by the health departments was	) ; ;			
	DHŒ		r healt			its wer								, availa			used.	Ith der	5			
	ІВМИСН & ИР		ules fo			led vis								s of HF			ally for	he he	)			
Punjab	Rajanpur		sched			chedu								tation			entific	h yd	2			
Pui	pakpattan		ere no			other s								ne limi			ot sci	rogra	5 0 )			
	Bahawalnagar		ere w											its is tl			was	ment	- - - -			
	nedgreffezuM		jab, th			dules.								ory vis			uildin	noleye	<u>)</u>			
	рно		nd Pun			isory visits were conducted according to their schedules.								pervis			acity b	taff de	5			
	mational Program		ndh ar			to the								the su			of cap	iodic	5			as:
	bederizene8 beeded2		or of Si			ording								uction			nents	No ne	)			ng area
	XHI Malir		ic sect			ed acc								f cond			compc	V () () ()	)			ollowii
	Тһаграгкаг		lldud n			onduct								train o			at the	the [	· ·			n the f
Sindh	ТМ Кһап		while i			vere co								r cons			ved th	heric	? 5 ) !			evels, i
	2nkkur -		dules,			visits v								e majo			obser	Sorgal	0			riate le
	<b>Kashmore</b>					visory								jab, th			it was					pprop
	IHdd		re wer			super								nd Pun			sector	the ti	; ) ;			at all a
	SHI		In PPP, there were			In PPP, the superv	required.							In Sindh and Punja	OL.		The public sector.	depends on the tra	organized	)		ıt staff
	HANDS		In PF			ln P	redu							IN Si	and POL.		The	den	Orga	0		currer
	LSAT Marks		7		ı 21.																	en to
	indicators	Is there a	schedule for	supervision?	If no, skip to question 21.	a. Are supervisory	visits conducted	according to the	established	schedule? If not,	why not?	b. How often do	they take place?	re a	constraints to	conducting	If a staff member's	performance in	logistics is not	satisfactory, is the	person provided with	Has training been given to current staff at all appropriate levels, in the following areas:
		16				17								18			19					20

	ATAŦ	>	z	z	z	z	z	z	>
	КР	<b>&gt;</b>	z	z	z	z	z	z	>
	netsidouled	*	z	z	z	z	z	z	>
	DHŒ	٨	Z	Z	Z	z	Z	Z	<b>&gt;</b>
	ІВМИСН & ИР	Å	Z	Z	Ν	Z	Ν	Z	<b>\</b>
Punjab	Rajanpur	<b>&gt;</b>	z	z	z	z	z	z	>
Pur	bakpattan	<b>\</b>	z	z	z	z	z	z	>
	Bahawalnagar	٨	z	z	z	z	z	z	>
	hedgreffaruM	>	z	z	z	z	z	z	>
	рно	>	z	z	z	z	z	z	>
	margonal Program	>	z	z	z	z	z	z	>
	Shaheed Benazirabad	>	z	z	z	z	z	z	>-
	KHI Malir	>	z	z	z	z	z	z	>
	Тһаграгкаг	>	z	z	z	z	z	z	>
Sindh	ТМ Кһап	>	z	z	Z	z	Z	z	>
	2nкkur -	>	z	z	Z	z	Z	z	>
	қэгршосе	>	z	z	z	z	z	z	>
	IHdd	>	>	>	<b>\</b>	>	<b>\</b>	>	>
	SHI	<b>&gt;</b>	>	>	<b>\</b>	>	<b>\</b>	>	>
	HANDS	<b>\</b>	>	>	٨	>	٨	>	>
	LSAT Marks	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
	indicators	a. completion and submission of LMIS reports?	b. proper storage of health products?	c. maintaining proper stock levels?	d. determining order quantities?	e. determining issue quantities?	f. estimating annual needs?	g. reviewing reports and records?	h. hands on training during supervisory visits

# 1.11 Section XI: Product use

	ATAŦ	z				N the	all c		z
	Kb	z	. <b>⊆</b>			N N N N N N N N N N N N N N N N N N N	planned and hardcopies are distributed to all		z
	nstsidoulsa	z	& NP			N	stribu		z
	DHŒ	z	ANCH			N deve	are di		z
	ІВМИСН & ИР	>	nd IRN			Y At the	pies		na
jab	Rajanpur	z	ıdh ar		blets	N ders. /	ardco		z
Punjab	pakpattan	z	in Sir		ible ta	N provic	and h		z
	Bahawalnagar	Z	The required standard treatment guidelines by the vertical program (NP in Sindh and IRMNCH & Punjab) were with limited scope to perform their duties.		cillin suspension, ORS (Low osmolality), Zinc Syrup or Zinc dispersible tablets	N vices	nned		z
	Nuzaffarghar	Z	rograr		inc di	N ne ser	s plai		z
	рно	z	ical pi		p or Z	N o all th	dition of the training manual the required trainings is		Z
	mational Program	>	e vert dutie		: Syru	Y ted to	train		na
	Shaheed Benazirabad	z	by th their		), Zinc	N stribu	luired		z
	KHI Malir	z	elines form		olality	N ib si	ne rec		z
	Тһаграгкаг	z	equired standard treatment guidelines by the vertic b) were with limited scope to perform their duties.		osmc	N nuals,	aal th		z
Sindh	тМ Кһап	z	ment cope 1		(Low	N Ig mai	manı		z
5	<b>2</b> пққпւ	z	treat ited s		ı, ORS	N rainir	ining		z
	қягµшоке	z	ndard th lim		ensior	N ram t	he tra		z
	IHdd	z	ed sta re wit		dsns	N I prog	n of t	∃Ws.	>
	SHI	z	equire b) we			N ertica	editio	LHSs and LHWs.	>
	SQNAH	z	The re Punjak		Amoxi	N The v	new e	LHSs	>
	Marks		⊣			1	н		1
	Indicators	Do written standard treatment guidelines exist for conditions	that use commodities in the supply chain being assessed?	If no, skip to question 4.	List the commodities being assessed in this supply chain that are required to comply with the standard treatment guidelines.	Are standard treatment guidelines distributed to all the	service delivery points ?		Are there written procedures
		П			2	3			4

	ATAŦ		ţ	itor		ors	are	pue	 ت			z		>		
	Kb		y and	mon		ehavi	nent,	ited a	moni			z		>		
	Baluchistan		pharmacy	lso to		bing b	partn	is lim	bnen			z		>		
	DHŒ		у рhа	was a		rescri	lth de	LHW	mild			z		>		
	ІВМИСН & ИР		d poly	PPP,		the p	of hea	rk of	on for			>		>		
jab	Rajanpur		avoid	y the		ge of	sion c	of wo	pensi	<del>-</del> E		z	.pg	>		
Punjab	bakbattan		are to	ided b		owled	ıpervi	cope	in sus	ospita		z	s visite	>		
	Bahawalnagar			prov		sic kno	the su	The s	oxicill	the h		z	cilities	>		
	nedgreffezuM		practices	ation		ne bas	nder	ions.	d Am	ed to		z	lth fa	>		
	рно		prescribed	ote the rational utilization of the medicines. The information provided by the PPP, was also to monitor		her th	ies, u	endat	ea an	could referred to the hospital.		z	lines for prescribing practices were not available at health facilities visited.	>		
	margonal IsnoitaM		presci	The i		to gat	facilit	ommo	diarrh	could		>	able a	>		
	Shaheed Benazirabad				of	ines.		. uo s(	ealth	ealth e rec	n for (			z	t avail	>
	KHI Malir		monitoring	media	the prescribed practices of the physicians.	escribed practices of the physicians. surveys are conducted by WHO / NGOs on to gather the basic knowledge of the prescribing behaviors	It is observed that in public health facilities, under the supervision of health department, are	ng to whos	Zinc supplementation for diarrhea and Amoxicillin suspension for mild pneumonia. It	e pati		z	re no	>		
	Тһаграгкаг		mon	of the						າen th		z	es we	>		
Sindh	TM Khan		recommendations for the	tion (		d by \	l that	ccord	ddns	be used as an initial dose then the patient		z	ractic	>		
0,	<b>2</b> пққп <b>ւ</b>			ns fc	utiliza	es of	nducte	serve	ring a	& Zino	itial d		z	Jing p	>	
	Қвариюке				ndatic	ional	ractic	e con	is ob	onito	ORS 8	an in		z	escrik	>
	IHdd		mmer	ie rati	ped p	eys ar	ns. It	currently not monitoring according to whose recommendations. The scope of work of LHW is limited and	with medicines (ORS &	ed as		z	for pr	>		
	SHI			ote th	rescril	surve	ysicians.					z	lines	>		
	SQNAH		МНО	promo	the p	Some	of phy	curre	with	could		z	Guide	>		
	Marks											Н	ı	Н		
	Indicators	for monitoring and supervising prescribing practices (e.g., monitoring number of	products/drugs prescribed/dispensed per								If no, skip to question 6.	Are the written procedures distributed to service providers	at all levels?	Do written universal safety precaution guidelines exist (e.g., disposing of used		
												2		9		

	ATAŦ			>			as		cian			z		z				
Kb				>	alth		xes w		physic	peq		z		z				
	Baluchistan			>	all health	safety	ety bo		guno	rescri		z		z				
	DHŒ			>-	ers at	ersal	of safe		the y	they p		>-		z				
	ІВМИСН & ИР			>	post	e univ	osal		s that	tient		>		z				
jab	Rajanpur			>	of the	ss. The	of disp		ed wa	he pa		z		z				
Punjab	bakbattan			>	syringe disposals, washing hands were available in form of the posters at	acilitie	thod (		serve	t for t	red.	z		z				
	Bahawalnagar			>	ole in	alth fa	e Me		ier ok	orrec	it may not be required	z		z				
	Nuzaffarghar			>	availak	he he	ailable		r barr	y be c	ot be	z		z				
	рно			>	were a	es. osters of universal safety guidelines were displayed in the health facilities. The universal safety ines were followed. Syringes and Safety boxes were available. Method of disposal of safety boxes was o the store keepers.	majo	majc	e ma	пау п	>		z					
	margonal Program			<b>\</b>	ands v	splaye	es we		The efforts to promote the STG were not seen, and the major barrier observed was that the young phys followed the specialist / consultant doctors. This practice may be correct for the patient they prescribed occasionally, but as a routine, in primary healthcare, it may not be required.	nd the ractio	ractio		>		z			
	Shaheed Benazirabad			>	ing h	ere di	The posters of universal safety guidelines were displayed in the health facilities. The universal safety guidelines were followed. Syringes and Safety boxes were available. Method of disposal of safety boxes was clear to the store keepers.  The efforts to promote the STG were not seen, and the major barrier observed was that the young physician followed the specialist / consultant doctors. This practice may be correct for the patient they prescribed	en, aı	This p	primary healthcare,	z		z					
	KHI Malir			>	wash	es we	l Safe		not se	ctors.	ry hea	z		z				
	Тһаграгкаг			>	osals,	idelir	ss and		vere i	nt do	prima	z		z				
Sindh	TM Khan			>	e disp	ety gu	yringe		STG \	ısulta	le, in	z		z				
,	2nкkur -			>	yring	sal saf	ved. S	oers.	te the	t / cor	a routine, in	z		z				
	қазµшоге			>	ding 3	nivers	follov	e keel	romo	scialis	t as a	z		z				
	lHdd			>	regar	regar	regar	regar	regar	s of u	were	clear to the store keepers.	s to p	s to p	occasionally, but as	>		>
	SHI			>	Guidelines regarding facilities.	oster	lines	to the	effort	ved th	ional	>		>				
	SQNAH			>	Guideline facilities.	The po	guideli	clear	The	follo	occas	>		>				
	Marks			$\leftarrow$								1		1				
Indicators		needles, washing hands before and after contact with patient)?	If no, skip to question 8.	7. Are precaution guidelines distributed to service providers	at all levels?	a. What mechanisms and	resources are in place to ensure the implementation of	standard treatment guidelines	and universal safety precautions?			Are commodities provided only to facilities that have staff	trained and are equipped to use them?	Are prescribing practices				
				7		∞						6		10				

	ATAŦ		ing								
	Kb		escrib		Zinc .						
	Baluchistan		for pr		RS + Z						
	DHŒ		VHO 1		ick (0	ed.					
	ІВМИСН & ИР		∧ √d b				bo pa				
jab	Rajanpur		The efforts of the PPP was for their internal records. However, the survey conducted by WHO for prescribing			f com een ok					
Punjab	bakbattan		y con		nse o	nds D					
	Bahawalnagar		surve		d the	ouse					
	nedgreffezuM		r, the	vals.	motec e respo						
	рно		The efforts of the PPP was for their internal records. However, th practices, should be repeated after recommended time intervals.			as pro ositive					
	margonal lenoitaM		ls. Ho	time	tive h	ار م					
	baderizanəd bəədad		ecord	anded	initia	ည					
	KHI Malir	ernal r		rition							
	Тһаграгкаг		er reco	Yes, by updating the manuals. And Nutrition initiative has promoted the use of combo pack (ORS + Zinc syrup) in District Gujrat Punjab, and according to NI, a positive response has been observed.							
Sindh	ТМ Кһап		d afte								
S	<b>2</b> пккиг		peat	anna	n n						
	қягµшоке		e PPP	be re	the m	Gujra					
	IHdd		of the	ponld	ating	זוווכו					
	SHI	fforts		ces, s	y upd						
	SQNAH		The e	practi	Yes, b	syrup)					
	Marks										
	Indicators	monitored and compared to standard treatment	whom?		ĿΞ	communication campaigns	underway for use of ORS and	Zinc Suspension, Amoxicillin	DT, Zinc DT?		
					11						

### **ANNEX 3**

#### PROCEDURE FOR REGISTRATION OF DRUGS

- 1. Drugs Act, 1976 regulates the import, export, manufacture, storage, distribution and sale of the drugs. Drugs are registered under section 7 of the Drugs Act, 1976. Registration Board is authority for registration of drugs.
- 2. The Registration Board has been setup under section 7 of the Drugs Act, 1976. The Registration Board is comprised of 17 highly technical, professional and experienced members from Medical, Pharmaceutical, Biologicals, Pharmacy, Veterinary, Law (from Law & Justice Division), Drug testing, relevant Directors of DRAP and representative of Intellectual Proprietary Organization. Representatives of stake holder's i.e. Pakistan Pharmaceuticals Manufacturer Association, Pharma Bureau and Pakistan Veterinary Manufacturer Association are included in the Drugs Registration Board as observers. Composition of Registration Board is laid down under rule 24 of the Drugs (Licensing, Registering and Advertising) Rules, 1976 framed under the Drugs Act, 1976.
- 3. Rule 26 & 29 of Drugs (Licensing, Registering and Advertising) Rules, 1976 prescribe procedure for grant of registration as follows:-
  - (i) An application for registration of a drug shall be made in Form 5 (for local manufacture), 5-A (for imported drugs), 5-D (for new molecule) or Form-E (for Patent Drugs) accompanied by fee in duplicate to the Registration Board addressed to its Secretary, and separate application shall be made for each drug.
  - (ii) The applicant shall furnish such further information and material as may be required by the Registration Board for proper evaluation of the drug.
  - (iii) The Registration Board may, if it considers necessary, cause the application for registration and the information and material supplied to it to be evaluated by a Committee on Drugs Evaluation consisting of experts related to the aspect of the drug (Expert Committee on Biological Drugs for biological drugs and Veterinary Expert Committee for veterinary drugs constituted under Section 10 of the Drugs Act, 1976) to be evaluated and obtain its report.
  - (iv) The Registration Board may, before issuing a registration, cause the premises in which the manufacture is proposed to be conducted to be inspected by itself or by its sub-committee or by a panel of Inspectors or experts appointed by it for the purpose, which may examine all portions of the premises and the plant and appliances, inspect the process of manufacture intended to be employed and the means to be employed for standardizing, if necessary, and testing the substances to be manufactured and enquire into the professional qualifications of the technical staff employed. Where inspection is carried out by a Sub-Committee or panel of experts or Inspectors appointed, it shall forward to the Registration Board a detailed report of the result of the inspection.
  - (v) The Registration Board shall, before registering a new drug for which the research work has been conducted in other countries and its efficacy, safety and quality has been established therein, require the investigation on such pharmaceutical, pharmacological and other aspects, to be conducted and clinical trials to be made as are necessary to establish its quality and, where applicable, the biological, availability, and its safety and efficacy to be established under the local conditions: Provided that under special circumstances to be recorded in writing, the Registration Board may register a drug and require such investigations and clinical trials to be conducted after its registration.
  - (vi) A new drug, where new method of manufacture is contemplated or a change is proposed in source, standard or specification of the active ingredient or the finished product may not require full investigations

and clinical trials except in so far as they are necessary for the purpose of establishing bio-equivalence, absorption, acceptability or other such features.

(vii) For imported drugs, GMP inspection of foreign manufacturer is also carried out prior to grant of registration. Experts in the relevant field inspect the foreign manufacturer to ensure that manufacturer fulfills the current Good Manufacturing Practices. However, pharmaceutical / biological products approved by United States Food and Drug Administration (USFDA), World Health Organization (WHO), European Medicine Agency (EMA) or regulatory bodies of Japan, Australia, Health Canada, Switzerland any of the regulatory bodies of erstwhile Western Europe or three stringent regulatory bodies of erstwhile Eastern Europe shall be exempted from the inspection of the manufacturing unit abroad.

(viii) If the Registration Board, after such further enquiry, if any, as it may consider necessary, is satisfied of its safety, efficacy, quality and economical value or where the public interest so requires, it may register the drug and issue a certificate of registration in Form 6, subject to such specific conditions as it may specify.

- (ix) Where it is necessary in the public interest so to do, the Registration Board may register a drug on its own motion without having received any application for registration.
- (x) If the Registration Board is not satisfied as to the safety, efficacy, quality or economic value of a drug, or where the public interest so requires it may reject the application for registration and inform the applicant of the reasons for such rejection in writing.
- (xi) The Drugs Registration Fee vide S.R.O 1117(I)/2012 is as follows:

		Fee (Rs.)	Renewal Fee (Rs.)
(a)	New drug or molecule / drug not manufactured locally	50,000/-	20,000/-
(b)	Any other drug for import	100,000/-	20,000/-
(c)	Drug for local manufacture	20,000/-	10,000/-
(d)	Drug for import		40,000/-
(e)	Drug for local manufacture		20,000/-
(f)	Variance to registration application i.e. changes in inactive raw materials, method of manufacture, testing methods or quality specifications, product specification, packing materials including changes of labeling specification etc.	5,000/-	

# 09

## REFERENCES



#### REFERENCES

- 1. Reproductive, maternal, newborn, and child health in Pakistan: challenges and opportunities: Health Transitions in Pakistan, The Lancet Volume 381, No. 9884, p2207-2218, 22 June 2013
- 2. National Institute of Population Studies (NIPS) Pakistan and ICF International Inc., Pakistan Demographic Health Survey 2012-13,
- 3. Interventions to address deaths from childhood pneumonia and diarrhea equitably: what works and at what cost? The Lancet, Volume 381, No. 9875, p. 1417-1429, 20 April 2013.
- 4. Battersby, A., & World Health Organization. (1985). How to assess health services logistics with particular reference to peripheral health facilities.
- 5. World Health Organization. (2008). Medicine prices, availability, affordability and price components: a synthesis report of medicine price surveys undertaken in selected countries of the WHO Eastern Mediterranean Region.
- 6. World Health Organization. (2004). WHO Medicines strategy 2004-2007: countries at the core.
- 7. National Essential Medicines List (NEML) of Pakistan, 2016
- 8. Zaidi, S., Bigdeli, M., Aleem, N., & Rashidian, A. (2013). Access to essential medicines in Pakistan: policy and health systems research concerns. PloS one, 8(5), e63515.
- 9. Nishtar, S. (2006). Pharmaceuticals--strategic considerations in health reforms in Pakistan. JPMA. The Journal of the Pakistan Medical Association, 56(12 Suppl 4), S100-11.
- 10. Rabbani, F., Perveen, S., Aftab, W., Zahidie, A., Sangrasi, K., & Qazi, S. A. (2016). Health workers' perspectives, knowledge and skills regarding community case management of childhood diarrhoea and pneumonia: a qualitative inquiry for an implementation research project "Nigraan" in District Badin, Sindh, Pakistan. BMC health services research, 16(1), 462.
- 11. Habib, M. A., Soofi, S., Sadiq, K., Samejo, T., Hussain, M., Mirani, M., ... & Bhutta, Z. A. (2013). A study to evaluate the acceptability, feasibility and impact of packaged interventions ("Diarrhea Pack") for prevention and treatment of childhood diarrhea in rural Pakistan. BMC Public Health, 13(1), 922.
- 12. N. Akber Pradhan, N. Rizvi, N. Sami, and X. Gul, "Insight into implementation of facility-based integrated management of childhood illness strategy in a rural district of Sindh, Pakistan.," Glob. Health Action, vol. 6, no. 1, p. 20086, Jan. 2013
- 13. Bagonza, J., Rutebemberwa, E., Eckmanns, T., & Ekirapa-Kiracho, E. (2015). What influences availability of medicines for the community management of childhood illnesses in central Uganda? Implications for scaling up the integrated community case management programme. BMC public health, 15(1), 1180.
- 14. Brown, A. N., Ward-Panckhurst, L., & Cooper, G. (2013). Factors affecting learning and teaching for medicines supply management training in Pacific Island Countries—a realist review. Rural Remote Health, 13, 2327.
- 15. Barrington, J., Wereko-Brobby, O., Ward, P., Mwafongo, W., & Kungulwe, S. (2010). SMS for Life: a pilot project

- to improve anti-malarial drug supply management in rural Tanzania using standard technology. Malaria journal, 9(1), 298.
- 16. Salenga, R., Robles, Y., Loquias, M., Capule, F., & Guerrero, A. M. (2015). Medicines management in the Philippine public sector during the response to Haiyan. Western Pacific surveillance and response journal: WPSAR, 6(Suppl 1), 82.
- 17. Kalu, N., Lufesi, N., Havens, D., & Mortimer, K. (2016). Implementation of World Health Organization Integrated Management of Childhood Illnesses (IMCI) guidelines for the assessment of pneumonia in the under 5s in rural Malawi. PloS one, 11(5), e0155830.
- 18. Bigdeli, M., Jacobs, B., Tomson, G., Laing, R., Ghaffar, A., Dujardin, B., & Van Damme, W. (2012). Access to medicines from a health system perspective. Health policy and planning, czs108.
- 19. Mikkelsen-Lopez, I., Cowley, P., Kasale, H., Mbuya, C., Reid, G., & de Savigny, D. (2014). Essential medicines in Tanzania: does the new delivery system improve supply and accountability?. Health systems, 3(1), 74-81.
- 20. Tan, A. C. W., Emmerton, L. M., Hattingh, L., & La Caze, A. (2015). Exploring example models of cross-sector, sessional employment of pharmacists to improve medication management and pharmacy support in rural hospitals. Rural and remote health, 15(4).
- 21. Kruk, M. E., Rockers, P. C., Tornorlah Varpilah, S., & Macauley, R. (2011). Population preferences for health care in liberia: insights for rebuilding a health system. Health services research, 46(6pt2), 2057-2078.
- 22. Saleem, F., Hassali, M. A., Iqbal, Q., Baloch, M., & Shanker, P. R. (2016). Uncontrollable medicine prices in Pakistan. The Lancet, 388(10060), 2602.
- 23. Villacorta □Linaza, R. (2009). Bridging the gap: the role of pharmacists in managing the drug supply cycle within non □governmental organizations. The International journal of health planning and management, 24(S1), S73-S86.

