

End Term Evaluation of Project for Accelerating Policy Change, Translation and Implementation for Pneumonia & Diarrhea Commodities in Pakistan

2016-2021

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End-term evaluation is part of the monitoring and evaluation activities conducted for 'Project for Accelerating Policy Change, Translation and Implementation for Pneumonia & Diarrhea Commodities in Pakistan (Pneumonia and Diarrhea Project)' to ascertain the achievement of targets and desired outcomes. The evaluation assessed the extent to which the project was successful in achieving its intended results and aided the beneficiaries while keeping in view the context of mid-term evaluation results and recommendations. It further explored the opportunities and lessons learned, which government stakeholders, UNICEF and implementing partners will use to inform existing and future programming. The evidence will also help in scaling up to other geographical settings within Pakistan and in other developing countries to curtail childhood morbidity and mortality.

Title	End-Term Evaluation of Project for Accelerating Policy Change, Translation and Implementation for Pneumonia & Diarrhea Commodities in Pakistan (Pneumonia & Diarrhea Project) 2016-2021
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The views expressed here do not necessarily reflect the position of UNICEF and authors take full responsibility of the contents of this report.

UNICEF Pneumonia & Diarrhea Project
End-Term Evaluation Report

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LIST OF ACRONYMS AND ABBREVIATIONS

AKU	Aga Khan University
Amox DT	Amoxicillin Dispersible Tablet
AMR	Anti-Microbial Resistance
APMOs	Additional Principal Medical Officer
ARI	Acute Respiratory Infection
AWP	Annual Work Plan
BHUs	Basic Health Units
BMGF	Bill & Melinda Gates Foundation
CAPI	Computer Assisted Personal Interviews
CCM	Community Case Management
CEO	Chief Executive Officer
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women
CHW	Community Health Worker
Covid-19	Coronavirus Disease 2019
CSG	Child Survival Group
CSPro	Census and Survey Processing System
DALYs	Disability Adjusted Life Years
DCP-3	Disease Control Priorities Edition-3
DHIS	District Health Information System
DHO	District Health Officer
DOHs	Department of Health services
DRAP	Drug Regulatory Authority of Pakistan
DRR	Disaster Risk Reduction
DT	Dispersible Tablet
ECD	Early Childhood Diseases
EML	Essential Medicine List
EMR	Evaluation Management Response
ETE	End-Term Evaluation
EPHS	Essential Package of Health Services
FGDs	Focus Group Discussions
GAPPD	Global Action Plan for Pneumonia & Diarrhea
GEROS	Global Evaluation Reports Oversight System
GPs	General Practitioners

GSEP	Gender, Social Exclusion and Poverty
HANDS	Health And Nutrition Development Society
HCPs	Health Care Providers
HLMIS	Health Logistics Management Information Systems
HPSIU	Health Planning, System Strengthening, and Information Analysis Unit
HRBA	Human Rights-Based Approach
IHME	Institute for Health Metrics and Evaluation
IHS	Integrated Health Services
IMCI	Integrated Management of Childhood Illnesses
IMNCI	Integrated Management of Neonatal and Childhood Illnesses
IRMNCH	Integrated Reproductive, Maternal, Neonatal and Child Health
IVAC	International Vaccine Access Centers
IYCF	Infant and Young Child Feeding
KIIs	Key Informant Interviews
KPIs	Key Performance Indicators
LFA	Logical Framework Approach
LHSs	Lady Health Supervisors
LHW	Lady Health Worker
LMICs	Lower-middle Income Countries
LMIS	Logistics Management Information System
Lo-ORS	Low Osmolarity Oral Rehydration Salts
M&E	Monitoring & Evaluation
MERF	Medical Emergency Resilience Foundation
MIS	Management Information System
MNCH	Maternal Neonatal Child Health
MSDP	Minimum Service Delivery Package
MTE	Mid-Term Evaluation
MO	Medical Officer
M/o NHR&C	Ministry of National Health Services Regulation and Coordination
NHV	National Health Vision
OECD/DAC	OECD Development Assistance Committee
OPD	Out-Patient Department
ORS	Oral Rehydration Solution
P&D	Pneumonia and Diarrhea
PAFP	Pakistan Academy of Family Physician

PATS	Pakistan’s Approach to Total Sanitation
PDHS	Pakistan Demographic and Health Survey
PHC	Primary Healthcare
PIMS	Pakistan Institute of Medical Sciences
PPA	Pakistan Pediatrics Association
PPP	Public Private Partnership
PPHI	People’s Primary Healthcare Initiative
PMA	Pakistan Medical Association
PMC	Pakistan Medical Commission
PNC	Pakistan Nursing Council
PSPU	Policy & Strategic Planning Unit
RAD	Research and Development
RHCs	Rural Health Units
RMNCAH	Reproductive, Maternal, Newborn, Child, and Adolescent Health
RMNCH	Reproductive Maternal Neonatal Child Health
RTM	Real-time Monitoring
SDGs	Sustainable Development Goals
SPSS	Statistical Package for the Social Sciences
SPRINT	Scaling Pneumonia Response Innovations
TOC	Theory of Change
TOT	Training of Trainers
TWG	Technical Working Group
U5	Under Five Years of Age
UHC	Universal Health Coverage
UHC BP	Universal Health Coverage Benefit Package
UN	United Nations
UNCRC	United Nations Convention on the Rights of the Child
UNEG	United Nations Evaluation Group
UNGME	United Nations Inter-Agency Group for Child mortality Estimation
UNICEF	United Nations International Children’s Emergency Fund
USAID	United States Agency for International Development
WHO	World Health Organization
WMO	Woman Medical Officer
Zn-DT	Zinc Dispersible Tablet

EXECUTIVE SUMMARY

Background and Evaluation Objectives

Project for Accelerating Policy Change, Translation and Implementation for Pneumonia and Diarrhea Commodities in Pakistan was implemented from 2016 to 2021 to improve child survival and achieving SDGs targets. UNICEF implemented the project through financial assistance of Bill and Melinda Gates Foundation (BMGF) with total investment of USD 12,516,903. With estimated 800,000 children's death, due to Pneumonia and 437,000 due to Diarrhea, both these diseases claim more lives of children than any other infectious disease. Pakistan is amongst one of the fifteen high-burden countries in the world that constitute majority of the global burden of both Pneumonia and Diarrhea (P&D), where 70% of the children lose their lives due to P&D before the age of five (IVAC 2021). Ensuring healthy lives for all is at the core of Sustainable Development Goal (SDG) 3. Nonetheless, it still seems challenging to reach the new SDG 3.2 target of U5 mortality in Pakistan to at least as low as 25 deaths per 1,000 live births by 2030 (Ministry of Planning Development & Special Initiatives, 2021). In 2013, WHO and UNICEF launched the Global Action Plan for the prevention and control of Pneumonia and Diarrhea (GAPPD), aiming to achieve 75% global reduction in severe P&D amongst U5 children by 2025. In order to attain GAPPD targets, a focused, coordinated and integrated actions are required for reducing child mortality.

P&D Project aimed to ensure that relevant national policies were in place, understood, and adhered to assure availability of the essential commodities for improving management of childhood P&D and increasing child survival by the end of 2021. Scope of the project included support to federal and provincial (Punjab and Sindh) governments, districts (entire Sindh and 5 districts of Punjab), professional associations, implementing partners, pharma industry and regulatory institutions.

This end-term evaluation was commissioned to assess success of P&D Project in achieving desired results and to ascertain the progress made as per the recommendations of mid-term evaluation. This evaluation documented project's achievements and lessons learnt, while keeping in view Pakistan's SDG 3 commitment to end preventable deaths of newborns and U5 children. Evaluation findings would be used in improving health programming as well as support in laying out an exit strategy. Federal and provincial governments, professional associations, UNICEF, BMGF, WHO and Aga Khan University (AKU) will be the primary users of this evaluation's results. Considering gender, equity, and child rights' considerations, specific objectives of this end-term evaluation were to:

- Assess the extent to which intended outcomes of the project are achieved by comparing it with the results from the baseline studies, evaluability assessment and mid-term evaluation;
- Review and document processes involved in achievement of the outcomes and identify gaps that have affected the project to ensure achieving the desired results;

- Review and assess proper utilization of supplies provided to beneficiaries at public facilities and identify the gaps in utilization, if any;
- Assess the potential for replicability and scalability;
- Provide guidance for improvement and course correction in all areas and programme strategies, and targets to ensure effective achievement of the results; and
- Document the recommendations for the follow up under Universal Health Coverage – essential package of health services.

Evaluation Methodology

This evaluation was an end-term evaluation, where a mixed methods approach (quantitative and qualitative techniques) was employed and both primary and secondary data was collected, wherever possible, disaggregated by gender. Availability of the revised and updated commodities at the public health facilities and their prescription to the children, suffering from Pneumonia and Diarrhea, was gathered through quantitative approach while effects of treatment outcomes and acceptability in the population was assessed through qualitative techniques. Qualitative component comprised of desk review, secondary data analysis, key informant interviews and focus group discussions whereas quantitative survey comprised of health facilities checklist and prescription reviews. Focus group and key informant interview guides, developed for this purpose, focused on the entire pathway of policy transformation processes (policy change, policy translation, policy implementation and knowledge management). Consultations and meetings were held with the stakeholders and implementers to elicit information related to achievements and impediments during the Project, which informed and strengthened the interview guides, while quantitative tools were pilot tested and then refined to improve logic, flow and language before use in the field.

The evaluation team worked in close collaboration with UNICEF Social Policy and P&D Project team and engaged other key stakeholders, through formation of Evaluation Reference Group for seeking their inputs and feedback on the evaluation approach. Cross cutting areas including gender, equity and human rights were kept in consideration while devising the data collection process and tools.

Key Findings

Evaluation findings are described in accordance with OECD/DAC Criteria for Evaluation.

Relevance determined the extent to which the project suited to the priorities and policies of the target group, recipient and donor. While Pakistan is third largest contributor to global under 5 Pneumonia deaths with 58,000 annual deaths, next to Nigeria and India, and nearly 8% of all U5 deaths in Pakistan were resulting from Diarrhea, which shows that there was high relevance of the project (UNICEF 2019b). Project was implemented in all districts of Sindh and selected districts of South Punjab having highest U5 mortality and provision of updated commodities was mindful of the socio-economic conditions of the pro-poor beneficiaries. Project objectives and activities catered to the needs of the marginalized and vulnerable children in these project areas.

The project primarily focused on policy level interventions and for community awareness, another implementing partner (Aga Khan University) worked on demand creation. Overall, the Project activities and interventions were aligned with federal and provincial policies, and governmental priorities as well as with global recommendations. The project was designed on the global recommendations of GAPPD with emphasis on national and provincial priorities as given in the National Health Vision, health sector strategies of Sindh and Punjab and UHC Benefit Package focusing on P&D interventions. P&D Project re-strategized the interventions to adapt to the changing scenario during Covid-19 pandemic, using innovative solutions like remote meetings and celebrations of special days on social media with global reach.

Coherence focused on the compatibility of the UNICEF's project interventions complementing those implemented by the government, and coherence of design and delivery in line with international standards. Realistic interventions led to the achievement of all planned activities, with exception of interventions requiring no-cost extension in 2020 and 2021. Project interventions were complimentary to the government agenda at all levels adopting a multi-pronged strategy to strengthen health system and supporting the federal and provincial governments in reducing P&D cases amongst U5 children through evidence-based research and policy change to implement GAPPD. Resultantly, the project augmented service delivery at health facilities and within community through innovative approaches to improve clinical management practices in both public and private sector. In alignment of Digital Pakistan Policy, the project further supported the government's vision to digitize its health information systems and rolling out of DHIS-2 for real time flow of information. External factors were identified at the inception and course corrections were made during implementation like use of social media. Taking guidance from the international standards, UNICEF adopted informed project designing, strategic planning, and implementation, supported by evidence, analytical rigor, continuous monitoring, and course-correction based on recommendations of landscape analysis, supply-chain analysis, budgetary gap analysis and mid-term evaluation.

Effectiveness measured the extent to which the project attained its objectives and the interplay of influencing factors, both facilitators and barriers. Project achieved its intended objectives for improving child survival in Pakistan. This included provision of updated commodities at health facilities through inclusion in essential medicines list, procurement lists and government's purchase orders; local manufacturing of updated commodities; revising pre-service and community modules of IMNCl guidelines and its availability at health facilities; capacity building of community and facility (public and private) staff; updating DHIS tools, deploying DHIS2 and integrating HLMIS for strengthening of supply chain management. Regarding commodity security, findings revealed that Amoxicillin was available at most of the surveyed facilities in the form of syrup or dispersible tablet (89.6%) and in Punjab, 100.0% of the facilities had some form of pediatric formulation of Amoxicillin. Amox DT was available at only 16.7% surveyed facilities of Punjab as compared to 77.8% surveyed facilities of Sindh. Procurement of Amox DT by PPHI Sindh and its distribution to nearly all of the BHUs of Sindh was the reason for this stark variation among two provinces. Despite initiation of procurement process in Punjab, DTs could not be procured due to lack of minimum required number of bidders (pharmaceutical manufacturers)

to fulfil the codal formalities. Nearly, three-fourth of the surveyed facilities had P&D commodities/equipment (including pulse oximeters, ARI timers and oxygen) available for providing oxygen therapy to U5 Pneumonia cases and there was little difference between provinces and types of health facilities.

Similar is the case with Pulse Oximeters, which were available at 79.2% of BHUs and 58.3% of RHCs of both provinces. Assessment of commodities required for the management of U5 Diarrhea, revealed an improved picture as compared to Pneumonia. Overall, Zn DT was available at 64.6% and Lo-ORS was available at 50.0% of surveyed facilities. However, co-packaged Zinc and ORS was not available at any of the surveyed facility. Achievement of project objectives was possible through advocacy and opinion building at all levels. A significantly high percentage of the surveyed health facilities in both Punjab and Sindh province had at least one care provider who had received trainings on revised management of P&D as per the IMNCI guidelines with little variation in availability of trained staff amongst surveyed BHUs and RHCs. Major factors influencing project's achievement included persistent advocacy, institutionalization through existing government structures, and engagement of professional associations and pharma industry in project implementation. In the latter half of the project, Covid-19 emerged as a challenge and affected some of the activities, particularly advocacy and capacity building interventions, which relied heavily on face-to-face interactions. However, there was low incidence of P&D in children during Covid-19 pandemic due to lockdowns/restrictions (social distancing, online schooling) and improved hygiene, as depicted in the annual DHIS reports. In order to achieve all these outcomes, various coordination mechanisms were established to engage government stakeholders, development partners and experts at federal and provincial levels. The project was a TOC-driven project, governed through an effective tracking mechanism with continuous in-built approach for course correction.

Efficiency measured the outputs – both qualitative and quantitative – in relation to the inputs. UNICEF effectively implemented the project with standardized management practices through a lean project team at federal and provincial levels. Certain implementation challenges were identified from the perspective of both right-holders from marginalized communities and duty bearers. This included frequent posting and transfers of key government officials, hampering advocacy efforts; limited focus on beneficiaries' awareness; concerns regarding provision of Amoxicillin to LHWs in view of AMR; inadequate availability of Dispersible Tablet (DT) in open market due to low demand; and preference for regular ORS and syrups by healthcare providers. Use of updated commodities were found to be cost-effective in comparison with syrups and keeping in view the annual facility budgets, overall cost of equipping the health facilities was quite affordable. During the course of the project, UNICEF leveraged additional resources for addressing gaps in availability of commodities, skills building and scaling up of best practices to uncovered provinces/areas. Describing value added in terms of lives saved and morbidity reduced, evaluation team observed an overall decrease in Disability Adjusted Life Years (DALYs) lost due to P&D in Pakistan. Finally, systems strengthening approach taken by the project enabled the interventions to be well entrenched and suitable for scale-up and replication to other provinces and regions.

Impact entailed the positive and negative changes produced by the project and the extent of achieving project goals in enhancing the health outcomes. Findings revealed high caseload of U5 Pneumonia and Diarrhea have been managed with effective therapeutic approaches through improved prescribing behaviors. The project served 71.3 million population of entire Sindh and 5 districts of Punjab. Over the project life, prescribing behaviors of healthcare providers have shown marked improvement to manage U5 P&D in accordance with IMNCI guidelines. Comparison of prescribing behaviors of healthcare providers with findings of Pakistan Demographic and Health Survey (PDHS) 2017-18, there have been marked improvements in prescription of updated commodities. Use of antibiotics, including Amoxicillin for U5 Pneumonia increased from 46.4% to 71.6%. Similarly, in U5 Diarrhea cases, use of Zinc and ORS showed marked improvement as prescription of Zinc increased from 12.5% to 70.2% and prescription of ORS increased from 37.4% to 78.7%. Overall, there had been steady decline in child mortality in Pakistan over the project life with 73.8 deaths per 1,000 live births in 2016, which had reduced to 65.2 in 2020 (United Nations Inter-agency Group for Child Mortality Estimation, 2020).

Sustainability was measured to ascertain the continuity of project benefits beyond the UNICEF funding. Taking systems strengthening approach, the project contributed to institutionalizing multiple interventions for sustenance beyond the project life. Sustainability was further ensured through strengthening of information systems, which included updating DHIS tools to include updated commodities, roll-out of DHIS-2 and implementation of HLMIS. Updating key policies and official guidelines including IMNCI and incorporating updated commodities within EML, procurement lists and government purchase orders would also support the sustainability of project interventions. Key facilitators for sustainability included political will and commitment for child survival in Pakistan; institutionalized advocacy and decision-making platforms for ownership; use of existing governmental systems and structures for implementation; and district and facility level availability of trainers on IMNCI. Main barriers and constraints hampering sustainability included limited local production of updated commodities (mainly Dispersible Table). Further, provincial stakeholders informed about increasing concerns regarding anti-microbial resistance arising from provision of Amox DT to LHWs. Therefore, IRMNCH Programme discontinued supplying Amox DT to LHWs in Punjab.

Evaluation of **cross-cutting themes** was conducted for gender, equity and human rights. UNICEF P&D Project has promoted gender-responsive and human rights-based activities to address gender discrimination and inequity across the marginalized and vulnerable communities of Punjab and Sindh province, through focus on bringing equity while targeting project funding to districts of Southern Punjab and Sindh – having highest childhood mortality in Pakistan and reinforcing collection of gender-disaggregated data. Gender, equity and human rights-based approaches were integral part of project planning and implementation as evident from gender sub-categorization of U5 P&D cases in customized DHIS2 tools; gender responsiveness in capacity building activities for care providers; project interventions focused on both public and private sector; and strengthening of PHC facilities serving rural and marginalized population and provision of modern diagnostics to empower LHWs. P&D Project recognized the multidimensional role of LHWs, working as a 'bridge' between the health system and community.

They mainly maintained a continuum for extending the reach of the health system and serve as agents of change.

Conclusion

The project successfully implemented the policy process to update relevant policies and guidelines with a focus on improving management of childhood Pneumonia and Diarrhea. Following the causal chain of policy change, its translation and implementation of actions, project successfully achieved its outcomes of improving availability of updated commodities to manage childhood Pneumonia and Diarrhea. This was achieved through timely identification of facilitators and barriers of the entire policy making process and building strong working relationships with policy makers and planners at all levels. Lessons learnt from project implementation were categorized along the policy process. At the level of policy change, it was evident that policy change was dependent upon identifying and striking a balance between the driving (facilitators) and resisting forces (barriers) of policy process. The project supported the development and implementation of joint accountability framework, which brought clarity in roles and responsibilities for government counterparts to achieve the desired outcomes. Similarly, federal level coordination forum (Steering Committee) having participation of all federating units helped in building shared vision for child survival. For policy translation, credible evidence was essential for facilitating policy translation and building ownership of policy makers and planners. Further, engagement of professional association proved very effective in capacity building activities. However, in-person engagements were very imperative for policy advocacy. For policy implementation, prescribing behaviors of public sector providers were dependent of the availability of updated commodities in the health facilities. Community linkage through LHWs improved referral of U5 Pneumonia and Diarrhea at the health facilities. Whereas both pull and push factors must be catered to ensure local manufacturing of updated commodities by Pharma industry. For knowledge management, use of federal coordination forums was very effective in knowledge management of the project activities.

Recommendations

UNICEFP&D Project is leaving behind quite a legacy that government is taking up or has already institutionalized. Recommendations under end-term evaluation focuses on sustainability of project interventions while addressing emerging gaps in improving child survival in Pakistan. Key recommendations are proposed at strategic and operational levels.

Specifically, at strategic level, recommendations include:

- Promoting focus on child survival through advocacy and follow-up on national and international commitments
- Using evidence from P&D Project in future programming for child survival
- Ensuring sustainability, scale-up and replication of the project activities
- Engaging pharma industry for local manufacturing of updated commodities

At operational level, specific recommendations include:

- Strengthening information systems and district capacities for commodity security
- Building staff capacities at health facilities and in communities
- Standardizing prescribing behaviors of healthcare providers
- Enhancing community awareness on childhood illnesses

1. BACKGROUND

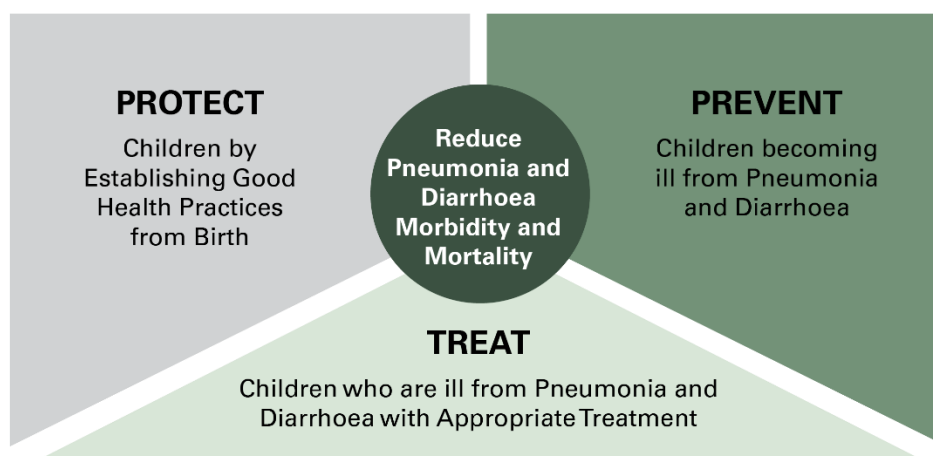
Pneumonia and Diarrhea (P&D) are leading infectious causes of deaths in children under the age of five years. In every 39 seconds, a child under-five (U5) dies due to pneumonia, while around 1,200 young children die per day owing to diarrhea (UNICEF 2021). Both P&D claim the lives of more young children (girls and boys) globally than any other infectious disease. This is evident from the latest statistics, which revealed that pneumonia continued to kill more children U5 worldwide, with an estimated 800,000 children's deaths, whereas diarrheal diseases caused deaths of 437,000 young children (IVAC 2021). The situation becomes more worrisome as approximately around 1.23 million children, on an average died due to P&D globally before reaching their 5th birthday, which is equivalent to more than 3,400 deaths per day (IVAC 2021; UNICEF 2021). Further, children living in countries that already bear disproportionate impacts of P&D now also contend with catastrophic impacts of Covid-19 pandemic. Ensuring healthy lives for all is at the core of Sustainable Development Goal (SDG) 3. Nonetheless, it still seems challenging to reach the new SDG 3.2 target of U5 mortality in Pakistan to at least as low as 25 deaths per 1,000 live births by 2030 (Ministry of Planning Development & Special Initiatives, 2021).

In 2013, the World Health Organization (WHO) and UNICEF launched the integrated Global Action Plan for the prevention and control of Pneumonia and Diarrhea (GAPPD), aiming to achieve 75% global reduction in incidence of severe P&D amongst children U5 by 2025. The GAPPD provides a roadmap for national governments and their partners to plan and implement integrated framework of key interventions to effectively 'protect, prevent and treat childhood' who are most at risk of serious illness or death due to P&D (WHO & UNICEF 2013), as illustrated in figure below (Figure 1). The GAPPD envisions the various interventions for controlling P&D for: a) protecting children by establishing and promoting good health practices; b) preventing children from becoming ill from P&D by ensuring universal coverage of immunization and healthy environments; and c) treating children who are ill from P&D with appropriate treatment. The GAPPD recommends reducing the child's pneumonia deaths to less than 3 for every 1,000 live births and diarrhea deaths to less than 1 for every 1,000 live births by 2025 (WHO & UNICEF 2013).

The developing country of Pakistan is amongst one of the fifteen high-burden countries in the world that constitute majority of the global burden of both P&D, where 70% of the children lose their lives due to P&D before the age of five (IVAC 2021). Pakistan has the third highest burden of maternal, fetal, and child mortality in the world. According to UNICEF (2019), the country's infant mortality rate was 56 deaths per 1,000 live births and under five mortality rate was 67.2 deaths per 1,000 live births (UNICEF 2019a). In other words, approximately, one in every 16 children die before reaching their first birthday, while one in every 14 children die before their 5th birthday. Acute respiratory infections (ARIs), malaria, and dehydration caused by severe diarrhea are major causes of childhood mortality in Pakistan (Rice et al. 2000; World Health Organization 2012; UN IGME 2020). Although Pakistan's under-five mortality rate gradually fell from 107.4 deaths per 1,000 live births in 2000 (111.3 deaths for male children and 103.4 for female children)

to 67.2 deaths per 1,000 live births in 2019 (71.6 for male children and 62.6 for female children) (UNICEF 2021), the country is still lagging behind to achieve GAPPD target. This is also evident from the statistics of 2017 that 90,398 deaths of U5 children occurred due to P&D, which account for 16.6 deaths per 1,000 live births (IVAC 2021). In that way, Pakistan secured 68 scores for pneumonia and 49 scores for diarrhea as per progress of overall GAPPD intervention score in 2020 (IVAC 2021). In order to attain GAPPD targets, focused, coordinated and integrated international, national and sub-national action on P&D control along with engagement of multi-levels stakeholders is required to continue sustainability and increasing the gains in the reduction of child mortality. P&D share several risk factors, including malnutrition, poor hygiene, poor socioeconomic status, lower education status and lack of breast-feeding. Access to basic lifesaving interventions, such as postnatal care, breastfeeding, adequate nutrition, vaccinations and treatment for common childhood diseases can save many young lives. Malnourished children, particularly those with severe acute malnutrition, have a higher risk of death from common childhood P&D. Nutrition-related factors also contribute to about 45% of deaths in children U5 years of age (WHO 2020). Literature suggests that early and appropriate treatment is the key to save lives of such children. Existing effective interventions delivered with high coverage can prevent majority of deaths due to P&D among children U5. Apart from accessible care, caregivers' recognition of disease, timely decision making and care seeking from a skilled health provider also determine disease outcome.

Figure 1: GAPPD Protect, Prevent and Treat Framework



Caregivers' poor disease recognition and delayed care seeking leads to preventable morbidity and mortality. A crucial aspect of family caregiver decision making is the choice of health provider(s). As facility-based care remains inaccessible to the most vulnerable children, the community health worker (CHW) programmes bridge the gap to improve access. In Pakistan, Lady Health Workers (LHWs) have been providing community case management (CCM) for P&D to children U5 since the inception of the National Programme for Family Planning and Primary Health Care (also called Lady Health Workers Programme) in 1994. LHWs provide curative

services for childhood diseases and dispense medicines (such as Zinc and ORS for diarrhea and antibiotics for pneumonia) according to guidelines. Unfortunately, utilization of community-based health worker services for these childhood illnesses remains low in many low and lower-middle income countries (LMICs). A systematic review of care seeking practices for childhood illnesses in LMICs, including Pakistan, found that only 4.2% caregivers seek care from CHWs for pneumonia and 5.4% for diarrhea. Statistics revealed that merely 38% children with diarrhea receive oral rehydration solution (ORS) and only 41.5% children with pneumonia receive antibiotics. LHW services has been advocated as a way of improving access to trained health providers for childhood P&D, however lack of medicines, commodities, training opportunities, weak referral linkages and low utilization remain major challenges (Aftab et al. 2018).

1.1. Object of the Evaluation – Pneumonia & Diarrhea Project

Object of this end-term evaluation was P&D Project on Accelerating policy change, translation and implementation for P&D commodities in Pakistan. The project was initiated in 2016 with total investment of USD 12,516,903 and was meant to finish at the end of July 2019. It was extended until end of 2021 because of delays in implementation and later on due to Covid-19 pandemic. The project was intended to increase child survival in Pakistan and to improve prevention, diagnosis and treatment of P&D in children U5. The project was implemented by UNICEF with financial support of the Bill & Melinda Gates Foundation (BMGF). This project aimed to ensure that relevant national policies were in place, understood, and adhered to assure availability of the essential commodities for improving management of childhood P&D and increasing child survival by the end of 2021. The main contributions of P&D Project included:

- Supporting improvement of relevant policies and guidelines at the national and provincial levels, with a focus on incorporating P&D management commodities into essential medicine lists, identifying key domestic resource mobilization stakeholders, and establishing a national coordination mechanism;
- Utilizing revised guidelines to develop new training materials for Health Care Providers (HCPs) and Lady Health Workers (LHWs) and advocate for increased resource allocation for commodities; and
- Catalyzing the initial stages of the commodities procurement process with government leaders and pharmaceutical manufacturing stakeholders, while updating supply chain and logistics management systems to track the respective commodities in the target provinces of Sindh and Punjab.

The project objectives were aligned with SDGs (SDG 3.2 target of ending preventable deaths and reducing U5 mortality in Pakistan to at least as low as 25 deaths per 1,000 live births by 2030). UNICEF Country Programme strategic health priorities (2012-2018 and 2018-2022) aim to link the most disadvantaged children and women with an integrated package of high-impact and high-quality healthcare commodities, with a special focus on system strengthening and ensuring a continuum of healthcare. These outcomes were consistent with the One UN Programme framework and national and provincial priorities for maternal, newborn, and child health

(MNCH). The following were the primary outcomes to be achieved through P&D Project in Pakistan:

Outcome 1: Policy Change - Existing national/provincial policies and guidelines are updated in line with global recommendations (WHO/GAPPD) for management of P&D among under five children by the end of 2021.

Outcome 2: Policy Translation - Translation of revised and updated P&D treatment guidelines into relevant action plans by all provincial/areas health departments by the end of 2021.

Outcome 3: Policy Implementation - Availability of essential commodities (Amox DT, Zn DT, co-packaged Lo-ORS Zn DT, oxygen, ARI timers & pulse oximeters) for treatment of childhood P&D by the end of 2021.

Outcome 4: Knowledge Management - Translation of lessons learned from this investment to other settings/broader geographical areas within Pakistan.

Soon after initiation of project in 2016, UNICEF conducted an 'Evaluability Study (2016-17)' and 'Baseline Landscape Analysis (2017)' to provide an insight on barriers and facilitators to policy translation and commodity access in the public and private sectors at national and provincial level (Sindh and Punjab). Later on, during the implementation of the project, a 'Midterm Evaluation (MTE), 2019' was conducted as a part of the planned monitoring and evaluation activities for the project to ascertain the directions and progress made in this project followed by recommendations to achieve the ultimate goal. Presently, UNICEF in its effort to assess the achievements of P&D Project planned to conduct end-term evaluation (ETE) to generate evidence on the impact of the project against adopted strategies as well as to document the lessons learnt during its implementation (TORs are attached as [Annex 1](#)). In the context of OECD/DAC (Development Assistance Committee) evaluation criteria, end-term evaluation explored project's relevance, coherence, effectiveness, efficiency, impact and sustainability across cross cutting areas (gender, equity, human rights and Disaster Risk Reduction [DRR]).

Target population and right holders – Overall, the project was designed to target more than 64 million population of both Sindh and southern part of Punjab, having highest infant and child mortality in Pakistan. Catering one third population of the country, main emphasis of the project was reaching 36.6 million rural and 0.16 million disabled and marginalized population of Sindh and South Punjab, with the focus on leaving no one behind in line with UN Disability Inclusion Strategy. Among these, 8.9 million U5 children (4.4 million girls and 4.5 million boys) were the prime focus. Rights holders were mainly project beneficiaries who were mothers and care givers of U5 children.

Table 1: P&D Project Beneficiaries

Total Population Served	Geographic Distribution		U5 Children				Population Below Poverty Line
	Rural	Rural	Total	Girls	Boys	With Disability	
Punjab (5 out of 36 districts)							

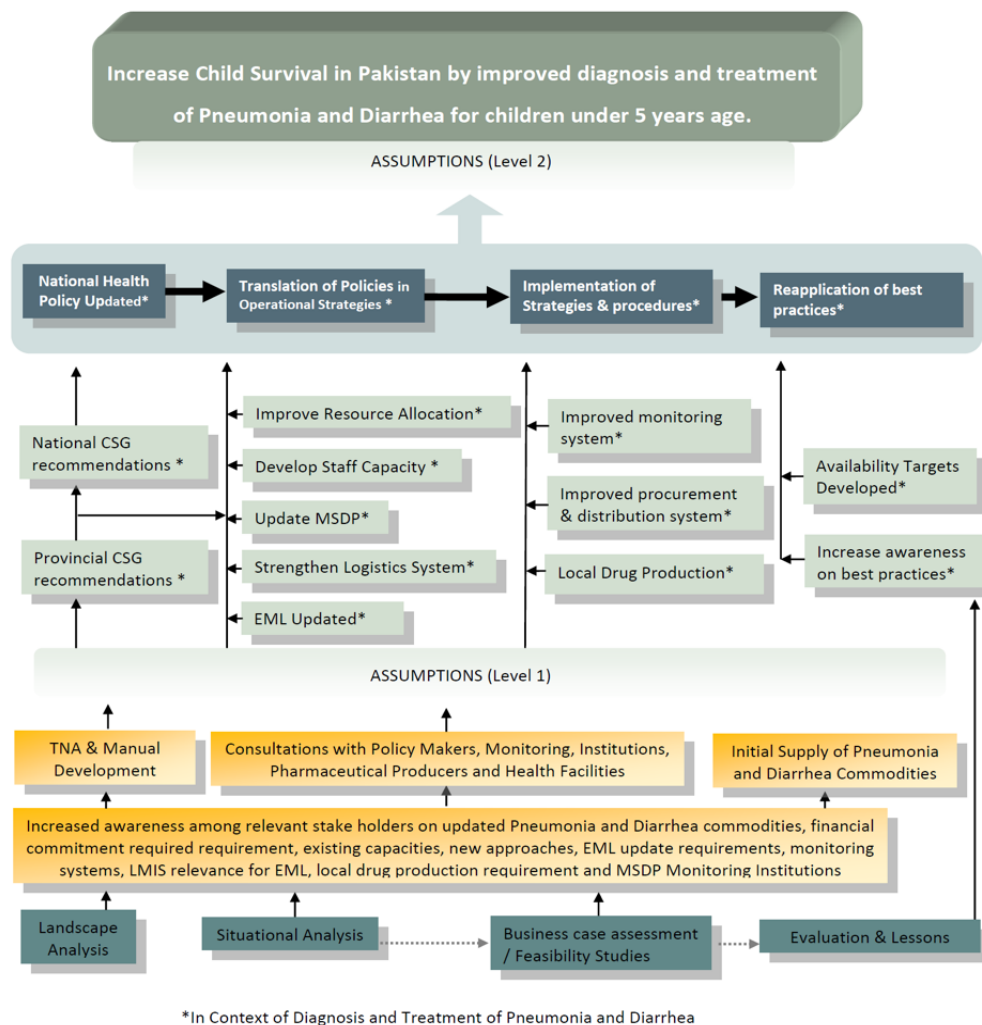
16,807,213	13,624,533	3,184,293	2,148,861	1,053,376	1,095,485	133,229	6,586,316
Sindh (All 29 districts)							
47,848,556	23,021,876	24,832,634	6,820,675	3,331,184	3,489,491	422,882	18,758,968
Total (34 districts)							
64,655,769	36,646,409	28,016,927	8,969,536	4,384,560	4,584,976	556,111	25,345,284

Duty bearers - State and non-state actors were engaged at all levels. It included M/o National Health Services Regulations and Coordination and UNICEF project team at federal level; Departments of Health, IRMNCH Programme in Punjab, LHW and MNCH Programmes in Sindh and UNICEF project team at provincial level; and at district level, key duty bearers were managers at District Health Offices, implementing partners like PPHI, HANDS and MERF, healthcare providers and Lady Health Workers (LHWs). Further, role of development partners was important like BMGF for funding support, WHO as technical review support and Aga Khan University as implementing partners for community mobilization in Sindh.

1.1.1. Project Theory of Change

A 'Theory of Change' was developed pertaining to accelerating policy change, translation and implementation under this project, based on Evaluability Study, Landscape Analysis and refined after Mid-Term Evaluation. Key outcomes of the project envisioned in the TOC included updated national health policies, translation of policies into operational strategies, implementation of strategies, and reapplication of best practices with assumptions identified at corresponding levels, as described in Figure 2.

Figure 2: Project Theory of Change



1.1.2. Stakeholders' Engagement

The project engaged multi-level stakeholders during the implementation, which included government health institutions at federal level (more specifically the M/o NHR&C and nominated members of established technical working groups, e.g., National RMNCAH TWG), the Provincial/Area Departments of Health, Lady Health Workers and MNCH Programmes in Sindh, Integrated Reproductive Maternal Neonatal Child Health and Nutrition Programme in Punjab, MIS Cells, Provincial TWGs and professional associations (Pakistan Pediatric Association and Pakistan Medical Association) and regulatory bodies and institutions. At district level, District Health Offices, Health providers, Lady Health Supervisors (LHSs) and Lady Health Workers (LHWs), while at community level, beneficiaries of services (women and children) were included. Altogether, the government health institutions and related professional bodies, UNICEF, BMGF, World Health Organization (WHO) and Aga Khan University (AKU) were the primary intended

users of this evaluation, who will ultimately benefit from the learning relevant to their work. The women, children (girls and boys), families, communities, health care providers, policy makers, opinion leaders and partners would be the secondary audience, who would benefit from the learning and findings of this evaluation.

Table 2: P&D Project Stakeholders – Roles and Responsibilities

Level	Stakeholders	Roles
Federal	M/o National Health Services Regulations and Coordination, UNICEF	Regulations and coordination
Provincial	Departments of Health, LHW Programme, IRMNCH Programme, UNICEF Project Staff	Management and Implementation Roles
District	District Health Offices, Healthcare Providers and Lady Health Workers (LHWs)	Coordination and Implementation Roles
Community	Concerned Population, i.e., service users (mothers/female caregivers of U5 children)	Recipients and Beneficiaries
Development Partners	BMGF	Funding Support
	WHO	Technical Reviews and Implementation Support
	Aga Khan University	Implementation Partner for Community Mobilization in Sindh

1.2. Purpose of Evaluation

The purpose of the end-term evaluation of ‘Accelerating Policy Change, Translation and Implementation for Pneumonia and Diarrhea Commodities in Pakistan’ (also known as Pneumonia & Diarrhea project)’ was to assess programme success in achieving desired results and objectives and to ascertain the progress made as per the recommendations of MTE of the P&D project. This evaluation documented the overall progress and lessons learnt from the project that will be used in improving health programming in accordance with the National Health Vision, and Universal Health Coverage Benefit Package (UHC BP) strategic focus, as well as support in laying out an exit strategy for future programming. The evidence will also help in scaling up programme activities to other geographical areas and settings in Pakistan. Evaluation findings will be used to inform the policy makers and planners at federal and provincial levels to update policies based on innovations and proven interventions of the project. Particularly, it will help to put in place better policies for commodity security, skill building and data reporting.

1.3. Objectives of Evaluation

Taking into account gender, equity, and child rights’ consideration, the specific objectives of end-term evaluation were to:

- Assess the extent to which intended outcomes of the project are achieved by comparing it with the results from the baseline studies, evaluability assessment and MTE;
- Review and document processes involved in achievement of the outcomes and identify gaps that have affected the project to ensure achieving desired results;
- Review and assess proper utilization of supplies provided to beneficiaries at public facilities and identify the gaps in utilization, if any;
- Assess the potential for replicability and scalability;
- Provide guidance for improvement and course correction in all areas and programme strategies, and targets to ensure effective achievement of the results; and
- Document the end project recommendations for the follow up under Universal Health Coverage - essential package of health services.

1.4. Scope of Evaluation

Thematic scope – The scope of the evaluation was end-term, taking into account the baseline evaluability assessment, landscape analysis conducted during inception of the project, theory of change and key findings of MTE to collect lessons and recommendations for future health programming and advocacy for improved performance as well as to improve the overall child survival within Pakistan.

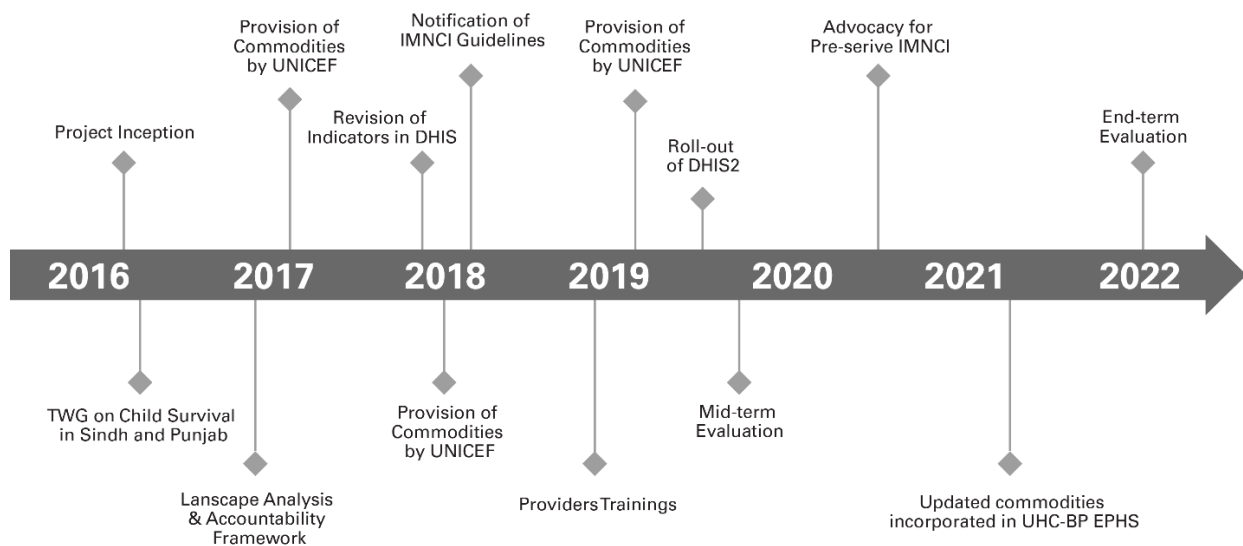
As per TORs, the assignment' scope of work was to focus and cover the following:

- Clarity of project concept, design, goals and objectives and implementation priorities;
- Effectiveness of the service-delivery approach and determine, as systematically and objectively as possible, the progress towards specified project objectives and the extent to which they were achieved and contributed to increase child survival in Pakistan;
 - This involved a careful analysis to improve the diagnosis and treatment of P&D in children U5 over the project period, keeping in perspective pre and post Covid-19 context in project evaluation results respectively (in light of the agreed Theory of Change (TOC) at the onset of the project)
- Describing the progress and achievements of project in relation to:
 - the agreed results with specific emphasis on the improvement of policies and guidelines at the national, provincial, and area levels;
 - identifying key domestic resource mobilization stakeholders for outreach and establishing a national coordination mechanism;
 - revised guidelines to develop new training materials for Health Care Providers and Lady Health Workers and their role in resource allocation for commodities, catalyze the initial stages of the commodities procurement process with government leaders and pharmaceutical manufacturing stakeholders;

- capturing changes in the supply chain and logistics management systems to track the respective commodities in the target provinces and national health sector’s strategic plans as well as the UHC framework.
- The efficacy of project structure and systems to manage with regards to coordination, supervision, results reporting, financial management, procurement of supplies, and monitoring and evaluation;
- Gender and equity approaches in design and implementation of the project; and
- Adequacy and effectiveness of project indicators with regards to monitoring the performance of the project.

Chronological scope – Chronologically, the evaluation covered project period between 2016-2021. Although project was expected to conclude in July 2019 however, no-cost extension was taken till end of 2021 to complete the project activities. Broadly, the timelines of project milestones are described in the figure 3:

Figure 3: Timelines of Project Milestones



Geographical scope – Project activities were implemented at relevant national, provincial and local level, where federal level was included to evaluate the relevant policies in relation to P&D project, and at provincial level, Punjab and Sindh provinces were covered to review the performance of the project. The geographical scope of this project included 29 districts of Sindh and 5 marginalized districts of Punjab [Southern Part] i.e., Pakpattan, Bahawalnagar, Rahim Yar Khan, Muzaffargarh and Dera Ghazi (DG) Khan, where the Pneumonia and Diarrhea Project was implemented. More than half of the burden of childhood Pneumonia and Diarrhea was within these two provinces. In Punjab, infant and childhood mortality was higher in districts of Southern Punjab than rest of the province, justifying their selection for project interventions. Further, limitations of project funding restricted its coverage of the remaining provinces.

2. EVALUATION METHODOLOGY

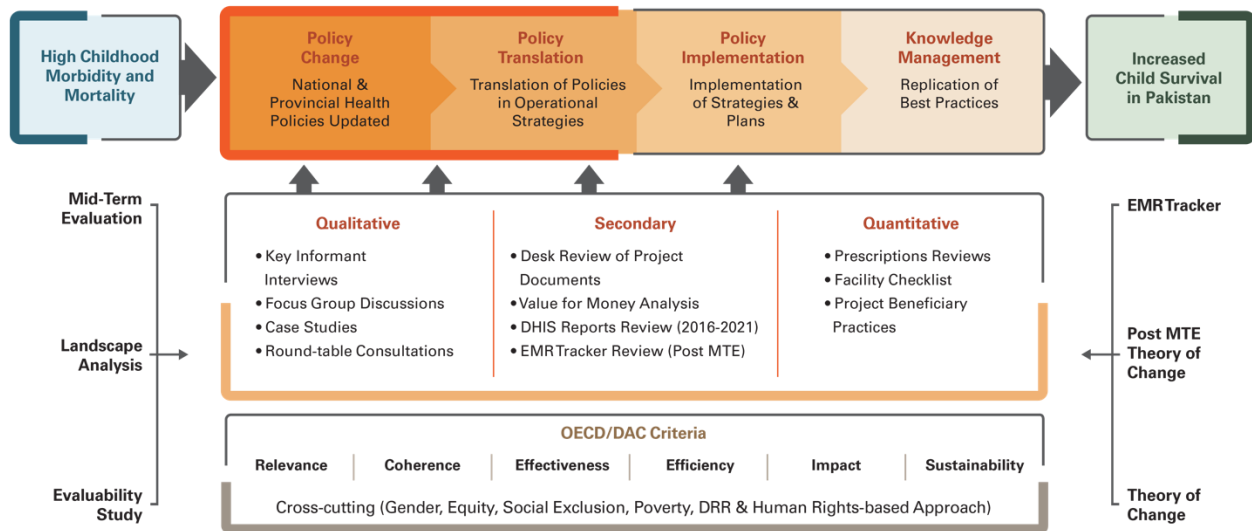
This was an end-term evaluation, where a mixed methods approach (quantitative and qualitative techniques) was employed and both primary and secondary data was collected, disaggregated by gender, wherever needed. Availability of revised and updated commodities at the public health facilities and their prescription to the children suffering from Pneumonia and Diarrhea was gathered through quantitative approach while effects of treatment outcomes and acceptability in the population was assessed through qualitative techniques. Qualitative component comprised of key informant interviews and focus group discussions whereas quantitative survey comprised of health facilities checklist and prescription reviews. Guides and tools developed for this purpose focused on the entire pathway of policy transformation processes (policy change, policy translation, policy implementation and knowledge management).

Consultations and meetings were held with the stakeholders and implementers to elicit information related to achievements and impediments during the project, which informed and strengthened the interview guides, while quantitative tools were pilot tested before used in the field. The evaluation team worked closely with project team and engaged key stakeholders through formation of Evaluation Reference Group for seeking their inputs on evaluation approach. Stakeholders included federal and provincial governments, health facilities, outreach workers, private sector, donors and development partners and the ultimate beneficiaries. Cross-cutting areas including gender, equity and human rights were kept in consideration while devising the data collection process and tools. Gender balance was reflected in the evaluation team, field teams' selection and during key informant interviews and FGDs. It was also incorporated in the approach of the evaluation methodology along with exploring gender differentials amongst girl and boy child in the data.

2.1. Evaluation Framework

A conceptual framework for the end-term evaluation (Figure 4) was developed to describe the evaluation approach and techniques within the context of interventions and the intended users' needs. The evaluation framework outlined the areas of evaluation, utilized methodologies in accordance with OECD/DAC criteria and their linkages with previous evaluations findings and recommendations. Further, cross-cutting areas of gender equity, social exclusion, poverty, disability, human rights-based approach and DRR were also taken into consideration during designing of this evaluation. This evaluation framework helped to understand cause and affect relationships of various project activities in light of OECD/DAC Criteria, Evaluability Assessment, Landscape Analysis and Mid-Term Evaluation. Relevant methodologies were chosen for tracking effectiveness and inferring out the impact of different interventions and their comparative and absolute effect on the beneficiaries.

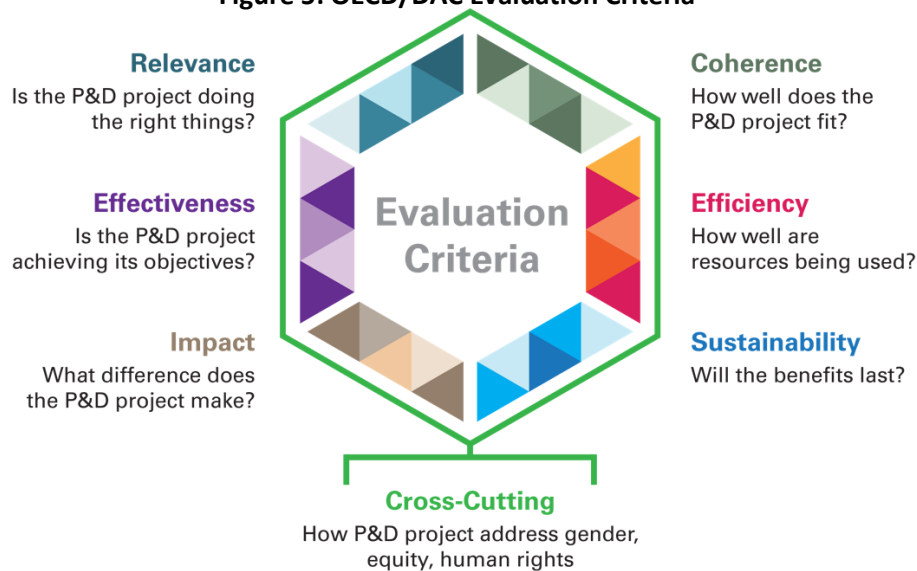
Figure 4: End-Term Evaluation – Framework



2.2. Evaluation Criteria

Considering the objectives of end-term evaluation of P&D project, OECD/DAC criteria of evaluation for the period 2016-2021 was used to conduct a robust and quality evaluation. The OECD/DAC consists of six evaluation criteria (OECD 2021), including relevance, coherence, efficiency, effectiveness, impact and sustainability. These criterions provided a normative framework to evaluate the P&D project. Cross cutting areas such as ethics, gender equality, equity and human rights-based approach guided the evaluation in all the criteria of assessment.

Figure 5: OECD/DAC Evaluation Criteria



2.3. Evaluation Matrix and Questions

An Evaluation Matrix was developed considering the objectives as per OECD/DAC criteria namely relevance, coherence, effectiveness, efficiency, impact and sustainability. All criterion-specific evaluation questions were considered for discussion with stakeholders and during data collection to conclude the findings of evaluation. Building on the primary and secondary aims, and objectives of the end-term evaluation, evaluation questions against seven OECD/DAC areas were part of the evaluation matrix along with indicators, data sources, data collection methods, tools, sample size and proposed data analysis method. In addition to DAC Criteria, cross-cutting areas of gender equality, equity and human rights including Convention on the Rights of the Child¹ and Convention on the Elimination of All Forms of Discrimination against Women² were taken into consideration while designing this evaluation for incorporation of UN and UNICEF's commitment to a human rights-based approach to programming to gender equality and to equity. The evaluation questions had been set to address the main focus of ETE including documenting the overall progress, extracting the lessons learnt from the project that could be used in improving health programming, as well as support in laying out an exit strategy for future programming. Building on the objectives of the end-term evaluation, evaluation matrix was

¹ The United Nations Convention on the Rights of the Child (UNCRC) is a legally-binding international agreement setting out the civil, political, economic, social and cultural rights of every child, regardless of their race, religion or abilities.

² The Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) is an international legal instrument that requires countries to eliminate discrimination against women and girls in all areas and promotes women's and girls' equal rights.

developed ([Annex 2](#)) to address key evaluation questions against each of the OECD/DAC criteria. Following are the evaluation questions, against OECD/DAC evaluation criteria:

2.3.1. Relevance

- How relevant and meaningful were the project objectives and activities as per the agreed outlined outcomes of policy change, policy translation and policy implementation in addressing the needs and priorities of the marginalized and vulnerable children in the project areas?
- Whether the mechanisms available to create awareness among communities were effectively linked to the project objectives?
- What was the relevancy of the project with the Federal and provincial Departments of Health, as well as the services being provided by the private sector?
- To what extent the objectives of the project were consistent with the existing national/provincial policies and guidelines (particularly Pakistan government recently endorsed UHC BP) in line with global recommendations (WHO/GAPPD) for management of P&D among under five children in Pakistan and are sustainable?
- Whether the project has been able to well adapt to the changing context and remain relevant, particularly related to Covid-19?

2.3.2. Coherence

- Were the strategies or approaches realistic, appropriate, and adequate to achieve its desired goal and results?
- To what extent UNICEF's project interventions complement those implemented by government?
- To what extent were external factors (political stability/instability, population movements, emergency context etc.) considered in the design and delivery of the intervention?
- To what extent was the intervention design and delivery overall in line with international standards and principles?

2.3.3. Effectiveness

- To what extent the project has achieved its objectives/outcomes and what were the major factors influencing the achievement or non-achievement of the objectives/outcomes especially keeping in Covid-19 pandemic crisis context from MTE onwards?
- To what extent the implementation of the project approaches worked as intended, particularly after the baseline in 2016 and Covid-19 pandemic emergency crisis in country after early 2020 onwards and subsequent adjustments?

- How effectively various Federal and Provincial DOHs/programmes coordinated among each other?
- Whether the health care providers and community health workers have the required knowledge and skills to appropriately utilize the supplies as per WHO/UNICEF recommended standards?
- Whether monitoring and reporting mechanisms exist and were effectively implemented for effective tracking of desired results and improvement in decision making and system?

2.3.4. Efficiency

- How well the resources, both human and financial, have been managed to ensure timely, cost-effective and efficient attainment of results?
- To what extent planning, budgeting, monitoring and evaluation, supervision, coordination, logistics and financial management systems are functioning in support of the project objectives?
- What are the implementation challenges from the perspective of both right holders and duty bearers especially for the under-five marginalized children of communities?
- To what extent has the project leveraged additional resources to address identified gaps and scale up the best practices to other geographic areas through project technical expertise?
- What is the value added in terms of number of lives saved and morbidity reduced?
- What actions including innovations are needed to improve the coverage to scale up to other geographic areas in country through evidence-based decision making?
- Whether the availability of P&D supplies was cost-effective and is doable (keeping in current Covid-19 context scenario as well)?

2.3.5. Impact

- To what extent has the project achieved its goals in enhancing the health outcomes especially of U5 children in the catchment communities in Sindh and Punjab target districts?
- To what extent the programme has been able to contribute to ownership and leadership of the Federal, provincial/area DOHs and inform evidence-based decision making or factors/challenges in influencing the achievement or non-achievement of outcomes?
- To what extent the programme learned and evolved over the 6 years and whether there were other alternatives, more cost-effective strategies available to reach intended results?

2.3.6. Sustainability

- What evidences exists to see the likelihood of the project results are sustained and will be adopted by the Government to ensure that the goal of the programme is achieved?
- What internal/external factors and drivers contribute to or constrain the sustainability of the project?
- What is being planned to sustain the process with government support beyond 2021?
- What is required to ensure prospects of sustainability of the project outcomes and the potential for replication or scale up of good practices and/or innovative approaches?

2.3.7. Cross Cutting Areas (Gender, Equity, Disability, Human Rights)

- To what extent the cross-cutting issues such as gender, equity, disability and human rights-based approaches were considered at various levels of planning, implementation and decision making?
- Are the services provided gender responsive and was a gender and human rights-based approach considered during implementation?
- To what extent the process of managing and mitigating risks within project (including internal and external processes) was achieved?
- What have been the key lessons and experience of HCPs, Lady Health Workers and Lady Health Supervisors as agents of change and their contributions to other sectors?

2.4. Evaluation Technique & Methodological Design

An end-term evaluation was conducted to determine the extent to which anticipated outcomes were produced with generation of evidence about the project. This evaluation employed overarching 'Theory-Based' and 'Participatory Evaluation' design. The projects' TOC formulated at inception phase and refined after mid-term evaluation, was used as a reference for the evaluation to examine the role played by the project in producing or influencing the observed results. The evaluation was thus designed to assess whether the theory held the truth, what was changed at each level of the theory, and explored the linkages between those changes. Further, Participatory evaluation approach facilitated in involving key stakeholders during all stages of the evaluation process.

The ETE employed mixed method approach with both primary and secondary components. Primary data was collected using quantitative and qualitative data collection techniques, while secondary data was gathered through document review of project documents and district specific DHIS reports. Qualitative data was collected through conducting key informant interviews and focus group discussions with the relevant stakeholders while quantitative data was gathered through facility checklists and prescription review from the surveyed health facilities. This component was particularly useful in addressing certain research questions pertaining to efficiency and impact criterion, whereas qualitative data mainly answered the rest of OECD/DAC criteria. This approach was finalized at the inception phase of the evaluation after

consultation with members of End-Term Evaluation Reference Group ([Annex 3](#)) comprising of representatives of Ministry of National Health Services, Regulation and Coordination (M/o NHR&C), Provincial Health Departments, UNICEF Project team and technical experts, established to provide oversight of the project.

2.5. Sampling Strategy

The sampling strategy and districts selection criteria for end-term evaluation was developed while keeping in view the strategy and criteria used during the mid-term evaluation. This was helpful for the evaluation team to present comparison over the period of time. In order to capture diverse perspectives, geographical variations and population coverage, three districts were selected purposively in Punjab out of the five intervention districts to have representation from all three divisions. Similarly, nine (9) districts were purposively selected from Sindh, using a divisional approach and ensuring uniform representation of topographical variations and population spread, as shown in Figure 6. Details about the sampled districts from total intervention districts in Sindh and Punjab provinces, is given in Table 3.

Figure 6: Sampled Interventions Districts for End-Term Evaluation

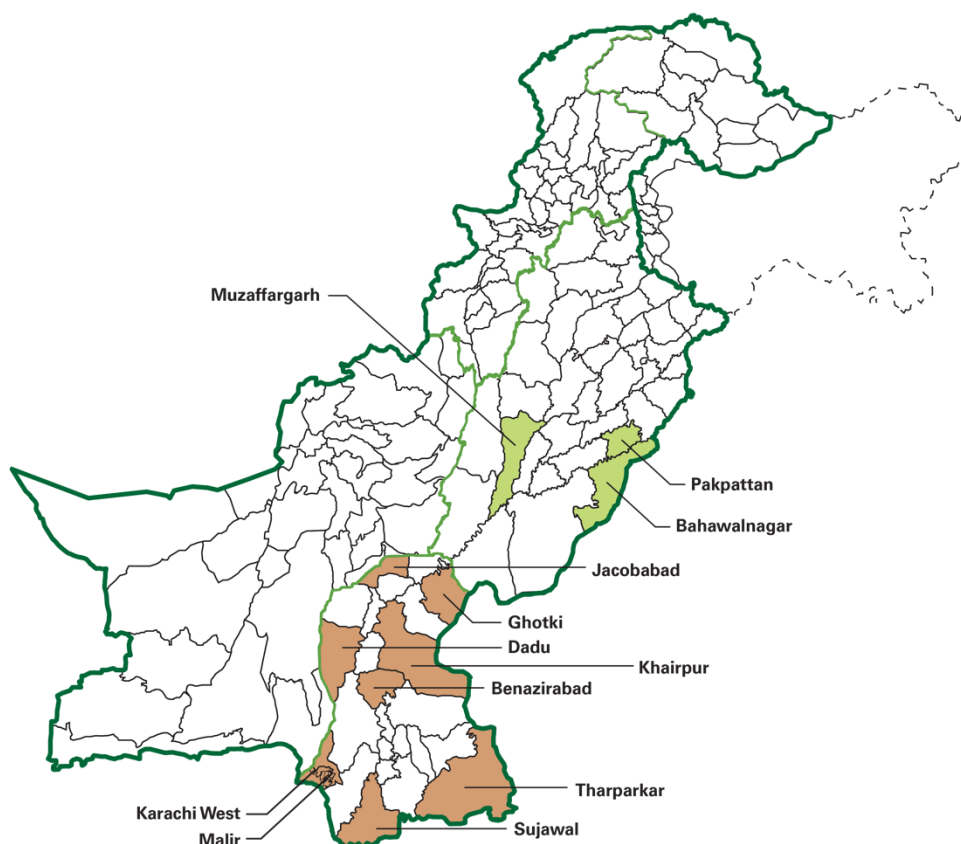


Table 3: Project Implementation and Sampling of Districts

PUNJAB	
Total intervention districts	05 (Bahawalnagar, Muzaffargarh, Rahim Yar Khan, Pakpattan, D G Khan)
Sampled districts	1. Pakpattan 2. Muzaffargarh 3. Bahawalnagar
SINDH	
Total intervention districts	29 (entire province)
Sampled districts	4. Karachi West 5. Malir 6. S. Benazirabad 7. Ghotki 8. Dadu 9. Khairpur 10. Jacobabad 11. Tharparkar 12. Sujawal

2.5.1. Qualitative Sampling

Qualitative data was collected to assess the achievement of the P&D Project and have in-depth examination of the barriers and facilitators of policy processes designed for improving morbidity and mortality associated with pneumonia and diarrhea. Stakeholders at the Ministry and Health Departments, agencies and institutions at federal, provincial/regional level, selected districts level, health facilities and community level were engaged for qualitative data collection. Purposive sampling was employed to recruit the participants for qualitative data collection, who were designated officials and office bearers, however the element of gender equality was considered at all times. The techniques employed for qualitative data collection included:

- KIs with federal, provincial, district and health facilities level stakeholders
- FGDs with service providers, community health workers, pharmacists and storekeepers, and beneficiaries (mothers)

KIs with key stakeholders at federal, provincial, district and health facilities level were undertaken. These KIs were qualitative in nature and had thorough representation of stakeholders from the concerned departments and institutions at federal, provincial and district levels. In total, 87 KIs were conducted to gauge the relevant information, and explore opinions of stakeholders in key areas against OECD/DAC evaluation criteria. Exclusion criteria included ministries and departments not directly related to project interventions. Provinces and regions of Pakistan where project was not implemented (Balochistan, Khyber Pakhtunkhwa, Gilgit Baltistan and Azad Jammu & Kashmir) were also excluded. In Punjab, 31 districts where project was not implemented, were excluded. Given the context of Covid-19, various available means

(teleconference, in-person meetings, etc.) were adopted to consult with multiple stakeholders, gather primary information/data and corroborate information. KIs guides for multi-level stakeholders were also developed. Following was the qualitative sampling matrix for KIs:

Table 4: Qualitative Sampling Matrix for Key Informant Interviews

Sr. #	Key Stakeholders	Targeted Officials	No. of KIs	Gender breakdown (Female/Male)
Federal Level				
1.	M/o NHR&C	Representative	2	1 female and 1 male
Provincial Level				
2.	DOH Sindh	Representative	1	Male
3.	Department of Primary and Secondary Healthcare Punjab	Representative	1	Male
4.	Directorates General of Health Services Punjab and Sindh	DG Health	2	All males
5.		Provincial Coordinator/ Director DHIS	2	All males
6.	Vertical Programmes	Representatives	3	All males
7.	Implementing Partners of DOH Sindh (HANDS, MERF, PPHI)	Representative	3	1 female and 2 males
8.	Pharmacists Associations / Pharmaceutical Manufacturers	Representatives	2	All males
9.	Child Survival Groups Punjab and Sindh	Representatives	2	All males
10.	Sindh Child Survival Programme	Representative	1	Male
11.	Department of Pediatrics, Ganga Ram Hospital, Lahore	Head of Department	1	Female
12.	Pakistan Pediatrics Association	Representative	1	Male
UNICEF Project Staff				
13.	Federal Staff	Focal Persons	2	1 female and 1 male
14.	Provincial Staff	Focal Persons (Sindh & Punjab)	2	Male
Development Partners				
15.	WHO	Focal Person	1	Male
16.	Aga Khan University	Focal Person	1	Male
District Level				

Sr. #	Key Stakeholders	Targeted Officials	No. of KIIs	Gender breakdown (Female/Male)
17.	District Health	CEO/DHO	12*	All males
18.	Department	DHIS& LHW Coordinators	24	All males
19.	Health Facilities	In-charges	24**	All males
TOTAL			87 KIIs	

* 12 selected intervention districts, including 3 from Punjab and 9 from Sindh provinces.

** Two (2) randomly selected Basic Health Units (BHUs) and Rural Health Centers (RHCs) from each of 12 selected intervention districts.

FGDs with service providers, pharmacists/medical storekeepers, community health workers and beneficiaries/service users in selected districts were organized to explore their perception and practices in detail against OECD/DAC evaluation criteria. Participants of FGDs were selected from the surveyed districts, meeting the selection criteria, viz., general practitioner in the district, medical storekeepers, LHWs and Mothers of U5 children. Due to the non-conflicting nature of childhood illnesses, participants of the FGDs expressed their thoughts and discussed opportunities to save the children of their communities candidly. Gender diversity was ensured among focus group members, whereas in FGDs with LHWs and mothers, all had female participants. Married women with no child or having children aged more than 5 years were excluded from the FGDs. In total, 48 FGDs were conducted with 12 FGDs from each group, as described in Table 5.

Table 5: Sampling Matrix for Focus Group Discussions

Sr. #	Key Stakeholders	No. of FGDs	Gender breakdown (Female/Male)
1.	Service Providers (Private Practitioners)	12	Females and males
2.	Pharmacists and Medical Store Keepers	12	All males
3.	Community Health Workers (LHWs)	12	All females
4.	Beneficiaries/Service users (Above 18 years - Mothers/Female Caregivers of girls and boys U5)	12	All females
TOTAL		48	

2.5.2. Quantitative Sampling

For facility checklists and providers' prescription review, selected health facilities were visited to gather quantitative data through structured facility checklists. Four health facilities including two Basic Health Units (BHUs) and two Rural Health Centers (RHCs) were randomly selected from total number of BHUs and RHCs in the district in each of the sampled 12 districts to obtain primary information using structured facility checklists. This approach of randomization was envisaged to be productive in covering the vast variations across the districts of the same province and providing certain degree of probability in selection of health facilities. For

quantitative data, non-operational primary healthcare facilities within sampled districts were excluded. Following is the sampling matrix of structured facility checklists:

Table 6: Sampling Matrix of Health Facilities

Description	Number
BHUs per district	02
RHC per district	02
Facility Checklist per facility	01
PUNJAB	
Number of districts	03*
Number of BHUs in 03 districts	06
Number of RHCs in 03 districts	06
Number of Facility Checklists filled in Punjab	12
SINDH	
Number of districts	09*
Number of BHUs in 09 districts	18
Number of RHCs in 09 districts	18
Number of Facility Checklists to be filled in Sindh	36
Total Number of Facility Checklists Filled (Punjab & Sindh)	48
<i>*Total 12 interventions districts from Punjab and Sindh</i>	

In order to collect data for providers' prescription review, the records of selected health facilities were comprehensively reviewed. Inclusion criteria was the consecutive last ten prescriptions by HCPs available in pharmacy registers for U5 Pneumonia and Diarrhea cases. This provided equal probability for inclusion of girls and boys. Details of prescription review are described in sampling matrix provided in Table 7.

Table 7: Sampling Matrix for Providers' Prescription Review

Description	Number
BHUs per district	02
RHC per district	02
Prescription reviews per facility	10
PUNJAB	
Number of districts	03
Number of BHUs in 03 districts	06
Number of RHCs in 03 districts	06
Number of prescriptions reviewed in Punjab	120

SINDH	
Number of districts	09
Number of BHUs in 09 districts	18
Number of RHCs in 09 districts	18
Number of prescriptions reviewed in Sindh	360
Total Number of Reviewed Prescriptions (Punjab & Sindh)	480

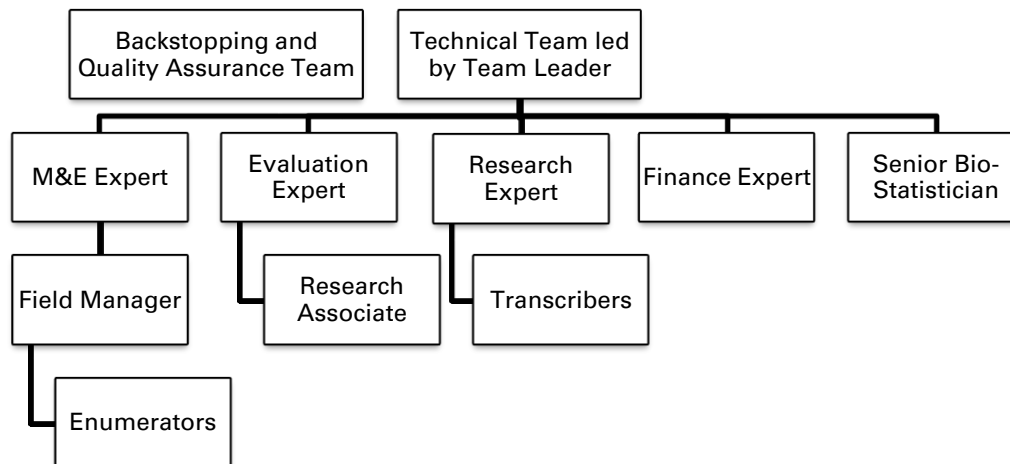
2.5.3. Secondary Data

Desk review of all the relevant project data available at federal, provincial, district and health facilities level were conducted to inform the scope of the project and to develop a better insight of the current scenario (See [Annex 4](#) for list of all documents reviewed). DHIS Report Review (2016-2021) and Post MTE EMR Tracker review were also undertaken based on secondary analysis. A comprehensive list of strategic project documents, developed during inception and implementation phase of the project were thoroughly reviewed, including Project Proposal, Logical Framework Approach (LFA) and Project Key Performing Indicators (KPIs), Project Theory of Change, Implementation and Operational Plans, Periodic Progress and Monitoring Reports, Training reports and database, Communication/awareness material and campaign records, Annual and monthly DHIS reports (2016-2021), Evaluation Management Response (EMR) submitted on GEROS; and UHC Benefit Package – Essential Package of Health Services for PHC and community. Further, federal and provincial policies and strategies, Provincial PC-1s, Global mandates such as SDGs, UHC and National Health Vision, evaluability study/baseline landscape and MTE were also taken into consideration to develop a thorough understanding of the P&D project. During this review, the existing data was studied and reviewed to analyze the policy, planning, management and financial aspects of the project along with Gender, Social Exclusion and Poverty (GSEP) analysis. The comprehensive secondary analysis facilitated in designing of ETE, development of data collection tools, elaborating programme achievements, extracting quantitative data for analysis and determining project impact over the period of time.

2.6. Evaluation Team

A team of consultants having the required skill mix was organized for efficient and effective completion of end-term evaluation. The organogram of the midterm evaluation team is given in Figure 7.

Figure 7: Organogram of Evaluation Team



2.6.1. Roles and Responsibilities of Team Members

Technical team was led by the team leader, delegating tasks to public health, evaluation, research and finance experts as well as senior bio-statistician/data manager and research associate. Technical team had rich experience of managing landscape analysis and MTE for P&D Project in the past. Technical team worked in close association for developing tools, during data collection and data analysis. Transcribers were engaged after the data collection phase to support technical team. Field teams were supervised by of Field Manager and Public Health Expert. Technical team members also participated in data collection at federal and provincial levels along with interactions with UNICEF team and the development partners. Field teams were responsible for gathering information at district, community and facility levels. The members of the technical team were split in at least two teams of two members in each team for conducting KIIs at federal and provincial levels, while 12 district specific field teams (36 enumerators) completed district specific KIIs, FGDs, structured facility checklists, prescription review and project beneficiary review. Three teams (having 2 females and 1 male in each) were formed in Punjab and nine teams with similar composition were established for Sindh. It was ensured that all field team members were fluent in native language and well versed in local customs. Teams were identified, recruited, organized, trained and supervised along with their logistics management and their subsequent payments. Guidance and support were sought throughout the evaluation process from backstopping team, comprising of experienced Health Specialist and Health Systems Expert. Through this qualified and experienced team, aspects of evaluation including developing and implementing a transparent system for evaluation with strong participation approach, performing rigorous analysis and developing quality report and basing decisions and making recommendations on quality information were strengthened in addition to overall quality assurance of evaluation work. Detailed roles and responsibilities of team members are also enclosed as [Annex 5](#).

2.7. Procedural Steps and Quality Assurance Mechanisms

2.7.1. Risks, Challenges and Mitigation

Risk management plan was developed, identifying events in which the team foresaw risks, constraints and potential shortcomings, which might affect the evaluation adversely. Accordingly, mitigation measures were adopted to ensure a robust evaluation process and outcomes, such as data quality, consistency and others. A risk register (attached as [Annex 6](#)) was prepared considering the limitations of end-term evaluation, e.g., government and project staff turnover and restrictions in accessibility to communities due to Covid-19 pandemic. Seeking security approval was also a pre-requisite for data collection in districts of southern Punjab, which were mitigated through maintaining a continuous liaison with the Directorate General of Health Services of both provinces, as well as adopting the relevant mitigation strategies.

2.7.2. Ethical Considerations

Ethical considerations for this evaluation were built on UNICEF Procedure for Ethical Standards in Research, Evaluation, Data Collection and Analysis (2021) and on UNICEF Strategic Guidance Note on Institutionalizing Ethical Practice for UNICEF Research. End-term evaluation also followed the UNEG Norms and Standards as well as the UNEG Ethical Guidelines for Evaluation. As per UNICEF guidelines and standards, external ethical review was obtained from a professional academic body Research and Development (RAD) to ensure and safeguard the privacy of subjects and the confidentiality of data (Certificate is annexed as [Annex 7](#)). Further, in accordance with UNICEF ethical guidelines and procedures (2021), evaluation team also completed course on 'Introduction to Ethics in Evidence Generation', whereas field teams were trained in a two-hour session on ethical considerations including informed consent during training. Both technical and field teams maintained highest standards of integrity, respect, beneficence, justice, integrity, sensitivity, and confidentiality in dealing with informants/participants, to ensure that the human and civil rights of people involved, were given due consideration. All the participants were engaged in a manner that honored their dignity, well-being, participation and personal agency.

Overall, the people-centric approach, minimizing harms and maximizing benefits principle was applied throughout, especially when working in the field. The ethical principles of participants' dignity and diversity, their right for self-determination and respect for vulnerable population, i.e., poor, marginalized and underserved were also adhered. UNICEF's protocol on Ethical Standards in Research and Data Collection and UNEG's ethical standards for data collection and evaluation were also incorporated in the trainings and their adherence was strictly observed. Additionally, following ethical considerations were imparted during training and data collection:

- **Obtaining Informed Consent:** Interviewers respected the rights of interviewed individuals. Every individual had the right to refuse to participate, or to refuse to answer specific questions. Verbal and written consent was sought after explaining the objective of evaluation, data collection procedures, along with risks and benefits, based on consent form ([Annex 8](#)). Field staff read out contents of consent forms and clarified any apprehensions of respondent/participants. Interviewers fully ensured understanding of the participants that

their participation would not affect their access to services and only continued getting necessary consent and approval.

- **Privacy and Confidentiality:** UNICEF's Policy on Personal Data Protection (2020) was fully adhered. Data collection process was conducted in a manner, comfortable for each respondent, and in which the individual was able to speak openly and honestly. It was ensured that interviewers did not discuss participants' answers with anyone, except the Field Manager and technical lead, when clarification was needed. Individuals' names, addresses or other identifying information were not asked, recorded or linked to any response to de-identify it.
- **Minimizing Harms and Maximizing Benefits:** All necessary measures were taken into account to ensure methodological choices, including choices of data sources, maximize benefits and minimize negative impacts on participants. Potential bias and implications were considered explicitly to prevent discrimination based on gender, race, religion, disability or any other factors, and, wherever possible, to ensure inclusiveness. Technical and field teams ensured the respect, protection and promotion of human rights and international standards at all levels.
- **Credibility and Accountability:** Evaluation team was cognizant of their ethical obligations for credible data gathering and reporting. All the information was transparently collected and analyzed to ensure credibility and accountability.
- **Safety and security of data:** Hard copies such as field interview notes, prints of photographs, or video or audiotapes were kept securely in a locked cabinet that could only be accessed by authorized evaluators. Soft copies in the computers were encrypted/password protected.
- **Independence, Impartiality and Conflicts of Interest:** Being a primary element of a staff member's obligation to maintain integrity, independence and impartiality required, it was ensured that there was no conflict of interest. In order to reduce bias or undue influence on findings, the evaluation team worked separately from the project team and the evaluators were unbiased with respect to the object of evaluation. None of the evaluators were part of the project implementation. No actual and potential conflicts of interests were identified for the evaluators.
- **Addressing Gender and Child Rights Issues:** During the evaluation, it was ensured that human rights principles of equality and non-discrimination was emphasized where everyone was entitled to equal enjoyment of their rights and the responsibilities and opportunities that come along, regardless of their gender. Considering in Pakistan, gender had remained a major organizing principle, this evaluation kept in consideration gender, child rights and social exclusion barriers during varied phases of evaluation including activity designing, consultations and stakeholder engagement, staff hiring, training, monitoring and in data analysis. Selection of technical and field teams ensured gender balance. Further, during training of field teams, gender and child rights orientation was imparted. Evaluation approaches and activities were followed to safeguard sensitivity in understanding gender values as well as child rights. All stages of evaluation were assessed through the lens of

gender, social exclusion, child rights and equity, ensuring that it was reflected in the findings and recommendations.

2.7.3. Back Stopping and Quality Assurance

Backstopping and quality assurance mechanism was established on what activities and outputs were to be monitored, how to monitor and what information was required to monitor them. This task was carried out by backstopping and advisory team at Contech, which constituted of highly experienced, qualified, well-known and senior public health expert and health systems expert. Monitoring and regular progress updates were used as a way of assuring quality. For quality assurance purpose, the final report was peer reviewed. Four-tiered monitoring of field work was carried out with field supervisor at first level, field manager at second level, virtual monitoring team at third level and ERG and colleagues from SP Section at fourth level to assure quality data collection. Technical team got engaged in qualitative data gathering to ensure quality, whereas real time monitoring of dashboard was done for quantitative data quality assurance. Data collection tools were pre-tested for flow, logic and consistency after conversion of paper-based questionnaire to computer assisted personal interviewing (CAPI) tool.

2.7.4. Continuous Liaison with UNICEF

Evaluation team worked in close collaboration and continuous liaison with UNICEF Social Policy (Evaluation and Research) Section. An ongoing platform was established on which knowledge and best practices were shared and issues were tackled with better understanding. The data collected shall be the sole property of UNICEF.

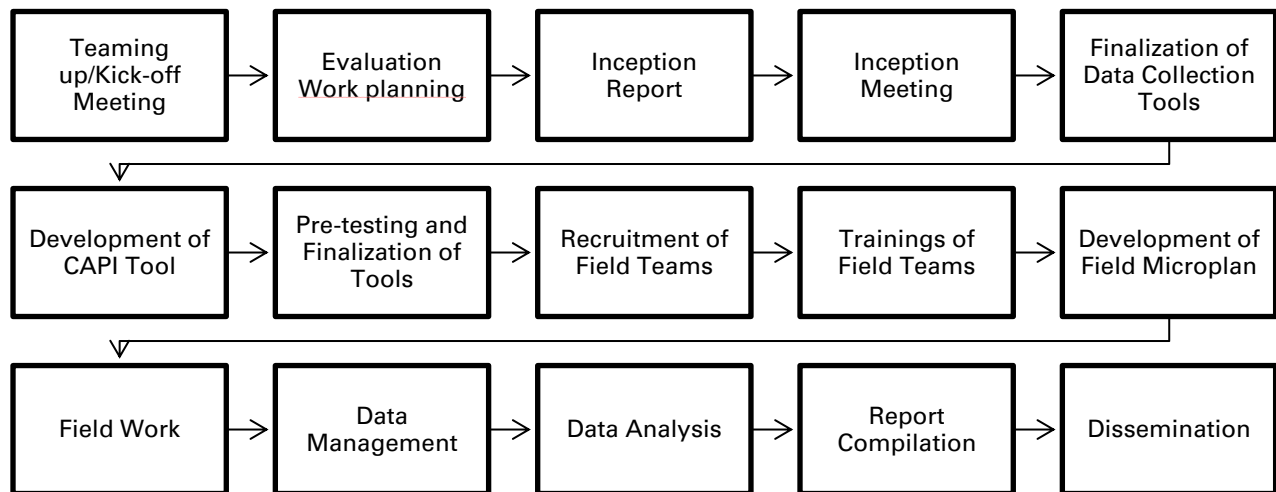
2.8. Evaluation Implementation

The chart below (Figure 8) shows flow of activities (See Workplan at [Annex 9](#)) during end-term evaluation.

2.8.1. Inception Phase

A kick-off meeting on 17th November 2021 was held with UNICEF Programme staff and Social Policy Section for briefing on P&D Project and sharing of expectations and quality standards for evaluation. Draft Inception Report was submitted before the Inception meeting. Final Inception Report entailed evaluation design, selection of relevant indicators based upon the evaluation objectives and evaluation matrix in accordance with UNICEF standard and evaluation tools. An Evaluation Reference Group was established for quality assurance of all key deliverables. An inception meeting was held on 10th December 2021 with participation from Federal Ministry, provincial departments, donors, development

Figure 8: Evaluation Work Flow



partners UNICEF project team and Social Policy (Evaluation and Research) Section in order to finalize the submitted inception report. Refinements were made in the draft report as per the feedback received at the inception meeting from the participants, including the UNICEF team and the reference group. OECD/DAC evaluation criteria (relevance, coherence, effectiveness, efficiency, impact, sustainability and cross-cutting) was specifically kept under consideration while developing the conceptual framework of the evaluation to achieve the evaluation objectives. Team also had detailed discussion during inception meeting with UNICEF project staff and PCO – Social Policy (Evaluation and Research) Section in order to finalize the evaluation matrix. Once the inception report was approved as per quality standards, next steps of evaluation ensued.

2.8.2. Field testing and Finalization of Data Collection Tools

Data collection tools for quantitative (checklists) and qualitative assessment (guides and talking points) were developed ([Annex 10](#)) in order to undertake a high quality; impartial, participatory, equity focused and gender responsive evaluation. Consultations and meetings were held with relevant key stakeholders as a means to provide an opportunity for building consensus on evaluation methodology and tools. A deductive approach was adopted in developing the data collection tools, as guided by the evaluation matrix along with desk review and documents/information received during consultations with the relevant stakeholders. The drafted evaluation tools were shared with UNICEF team, Social Policy (Evaluation and Research) Section and Evaluation Reference Group for feedback and endorsement. Feedback received after submission of the guides and checklists was incorporated to finalize tools. Approved tools after the inception meeting were tested in the field, in same settings followed by adjustments, if needed, to determine any problem in language of questionnaire, skip patterns, completion of interview in a given time; and clarity of enumerators on questionnaire. Field-testing was conducted systematically, with potential respondents by using the same method of

administration. Once finalized, the paper-based checklists and proforma were translated into an electronic version for the computer assisted personal interviews (CAPI). Census and Survey Processing System (CSPPro) and its Android based application for tablets CSEntry was used to enter data in the field and clean the collected information.

2.8.3. Recruitment of Field Staff

Qualified and experienced field staff members for evaluation was identified, short listed and recruited for end-term evaluation. Following was the structure and composition of the teams:

- Federal and Provincial level KIIs (In total 2 teams of 2 Technical team members) - 2 Teams from Technical Team conducted federal and provincial level KIIs in Punjab and Sindh
- District level KIIs, health facilities visits, FGDs including beneficiary practices and secondary document collection (In total 36 persons) for 8 days
 - Punjab: 3 district level teams of 3 persons each (6 females + 3 male) for 8 days
 - Sindh: 9 district level teams of 3 persons each (18 females + 9 males) for 8 days

Technical team members were involved in carrying out federal and provincial level interviews. They also visit few districts, health facilities and interacted with beneficiaries along with the field team. The data collectors were responsible for conducting district specific KIIs, health facilities visits, FGDs, project beneficiary practices and secondary document review. It was ensured that field team members must be graduate, fluent in native language and well versed with the local customs. District teams were supervised/monitored by Field Manager, who acted as coordinator and responsible for overall supervision and reporting to Technical Team. Field teams were identified, recruited, organized, trained and supervised by Contech, which was also responsible for supervision, transportation and logistics of team movements, and their subsequent payments. The entire district level evaluation fieldwork was completed within a span of 2 weeks.

2.8.4. Training of Field Staff

Before training of field teams, a comprehensive training guide for the field teams was prepared with clear instructions and guidelines, which was distributed among the data collectors/enumerators. This training guide covered topics, e.g., evaluation protocols, how to approach the concerned participants, how and when to probe, ethical requirements, filling of tools and recording necessary information while ensuring completeness and quality. The training of data collection teams was done at following two levels to achieve uniform standards and quality assurance:

- One-day Orientation for technical team members for federal/provincial level KIIs on 7th January 2022; and
- Two-day Training workshop of field teams/enumerators at Lahore for district specific data collection was held on 11th & 12th of January 2022.

The field training workshop was conducted and in a systematic manner to ensure quality completion of data collection exercise within the stipulated time. This included finalization of field plans, availability of printed material, training guide, survey tools, Android tabs and nametags. Training topics included:

- Purpose of Evaluation and its specific objectives;
- Methodology and field work strategies;
- Ethical considerations;
- Techniques of filling out tools/Recording information; and
- Field simulation

Specific attention was paid to ensure that data collectors have a clear idea of the objectives of evaluation so that they are aware when to elicit information. Ethical considerations including confidentiality, informed consent, privacy and anonymity was also incorporated in the training sessions. Emphasis was also given to ensure that training environment is conducive, without disturbance, with sufficient seating arrangements, keeping participants, trainers and field monitors (from Contech and UNICEF) in consideration. Followed by the field simulation activity, a detailed micro-plan was developed on the last day of training, which was shared with the technical team and UNICEF. The micro-plan entailed day-to-day data collection activities of each of 12 district field teams, ensuring that the provided trainings was put to practical use and that the data collection was carried out in a systematic/professional manner. Micro-plans also facilitated monitoring of data collection activities in the field and addressed any issues that arose during data collection.

2.8.5. Fieldwork Monitoring and Data Collection

The data collection took place as per the detailed micro-plan. The entire evaluation fieldwork was completed within a span of 4 weeks inclusive of 2 weeks of district and facility level data collection. However, the technical team reconnected with certain key informants to elaborate further on their discussion during the report-writing phase. A thorough monitoring mechanism at both macro and micro levels was employed for assuring quality of collected data, by developing monitoring tools, their field-testing and modification. A quality assurance strategy for evaluation and monitoring and evaluation plan of the field activities was developed along with detail procedures and protocols that were shared with UNICEF. A participatory monitoring and evaluation approach was adopted, involving stakeholders in the process of data collection. Specific measures were established to ensure proper accountability and transparency throughout the evaluation, specifically during the data collection phase. Senior Public Health Expert from technical team was assigned task of assuring data quality. Some measures taken for monitoring included *Accompanying Calls* to observe some of the interviews for ensure that the interviewers were conducting the interview well, asking the questions in the right manner and interpreting the answers correctly; *Conducting Spot Checks* to ensure that the questions were being asked properly and recorded appropriately, some of the addresses selected for interviewing were spot-checked to ensure that the enumerators were interviewed in the right

manner and that respondents were being identified correctly; and *Questionnaire Completion Reviews* involving reviewing of a proportion of questionnaires to ensure that they were complete and internally consistent using CS-Pro batch application. *Real-time monitoring (RTM)* using Dashboard by virtual backstopping team was conducted of responses collected through CAPI.

2.8.6. Data Management

Quality was ensured during field work by field manager and technical team, who reviewed/checked tools for completeness and logical errors to ensure quality standards. All completed tools were kept confidential after entry/transcriptions, analysis, and report writing. It was ensured that only authorized personnel had access to the filled tools. Electronic soft data was stored in a database while reports were entered whereas entered data was kept in folders and backup for safety purposes. Data gathered through CAPI was entered on tablets with data validation checks in place, while KIIs and FGDs were recorded and transcribed. Quality of transcripts was maintained through cross-checking of recording and field notes. To minimize human error, data entry on CAPI and transcription was done carefully considering all field notes to ensure the proper flow and recording of valuable information. Physical validation of a sample of data was conducted during routine monitoring visits. Once data was collected, cleaned and secured, it was transcribed for analysis. A team of transcribers were responsible for transcribing data of KIIs and FGDs.

2.8.7. Data Analysis

Qualitative data was analyzed thematically to capture the overwhelming amount of information hidden in the data using a comprehensive coding framework. Transcripts were examined manually to identify codes using thematic analysis and a system of constant comparison. This whole process included choosing units of meaning, identifying general themes, categorizing and classifying of overarching themes from the emergent data. Based upon these themes, subjective meaning system was constructed from the units of meaning in data. In order to reconstruct meaning systems regular linkages were considered between units of meaning in the data. Finally, invariants or general commonalities by comparing individual systems of meaning or 'cases' were inferred. After data coding, the narrative was sorted into the emerging themes. Overall, the findings were analyzed in the context of evaluation objectives, questions as per OECD/DAC evaluation criteria as well as strengths, weaknesses and constraints of P&D project. At the end, triangulation was applied to qualitative and quantitative findings to present end-term evaluation findings and recommendations. Evaluation matrix provided a framework to analyze and triangulate the collected data. The quantitative data analysis was processed using SPSS (version 21), while qualitative data was analyzed thematically. For quantitative analysis, frequency tables and cross-tabulations were carried out to answer the relevant evaluation questions.

2.8.8. Report Compilation

A template of report, agreed in consultation with UNICEF has been used to present findings of the evaluation. The structure and quality of the evaluation report adheres to UNICEF/UNEG quality standards in producing a clear, succinct, high quality and user-friendly evaluation report reflecting comments received from various reviewers, stakeholders, and the client, and presentations to share findings with stakeholders. The report was developed, entailing details of evaluation scope and objectives, evaluation questions as per OECD/DAC, evaluation matrix, methodology, and key findings. The narrative report presented the comprehensive quantitative and qualitative analysis of strengths, weaknesses, achievements, constraints and lessons learnt during implementation and recommendations to improve scalability in future. The draft report had been shared with UNICEF and Evaluation Reference Group for review and comments. A presentation on preliminary interim findings was also given to highlight the findings of the end-term evaluation at end of January 2022. The final report followed the UNICEF Evaluation Report Standards and will be uploaded on Evidence System Integration (EISI). Evaluation findings, results of the end-term evaluation and lessons learned will be shared with federal and provincial stakeholders for consensus building during a national level dissemination event.

2.9. Limitations of the Evaluation

Certain aspects of the DAC Criteria, like efficiency in terms of cost per beneficiary and comparison of the project cost with other similar interventions could not be assessed due to lack of budgetary data. It was difficult to gather GPs for focus group discussions as they had varying schedules of practice. This was dealt through organizing their FGDs on Sundays. Limitations of language in district level assessment were catered through recruiting local enumerators and supervisors. Routine information system (DHIS) did not capture gender disaggregated data and the issue was resolved through recording gender from facility record against individual prescriptions.

Repetitions of findings could be felt due to overlapping of information required to address individual evaluation questions of the OECD/DAC Criteria. Evaluation team tried to avert this limitation as much possible during interpretation of analysis. Lastly, attribution of child survival outcomes with project interventions was a key limitation as no baseline data was collected on child morbidity and mortality. This was mitigated through drawing comparisons with secondary data including PDHS 2017-18, which was carried out in the same year and yearly reported estimates of UN Inter-agency Group for Child Mortality Estimation to have a fair level of attribution.

3. EVALUATION FINDINGS

This section describes the findings of end-term evaluation of UNICEF P&D project, documenting the achievement of project outcomes and addressing the evaluation questions derived from OECD/DAC Criteria, including relevance, coherence, effectiveness, efficiency, impact, sustainability, and cross-cutting areas comprising of gender, equity and human rights.

3.1. Status of Project Outcomes

Status of project outcomes is drawn from the findings of the evaluation. While details of these findings are provided under individual evaluation questions in the subsequent sections, overall snapshot is provided here to apprise the readers about the programmatic achievements. P&D Project focused on ensuring that relevant national policies were in place, understood, and adhered to in order to ensure availability of the essential commodities for improving management of childhood diarrhea and pneumonia. Project supported the policy processes for increasing child survival through the causal chain of policy change, its translation and implementation followed by knowledge management. Findings of the evaluation, later discussed in detail, revealed that project oversight and coordination mechanisms were established and strengthened at federal and provincial levels to steer the project activities. Project advocated and supported to ensure availability and use of updated commodities to manage U5 Pneumonia and Diarrhea. Adhering to global recommendations and local context, treatment guidelines were updated, and healthcare providers were trained both within health facilities and outreach. Project further strengthened management information systems for service delivery, logistics and supply chain management through revisions and digitization. Taking a system strengthening approach, these outcomes were institutionalized, and lessons learnt were translated to other geographical settings through knowledge management.

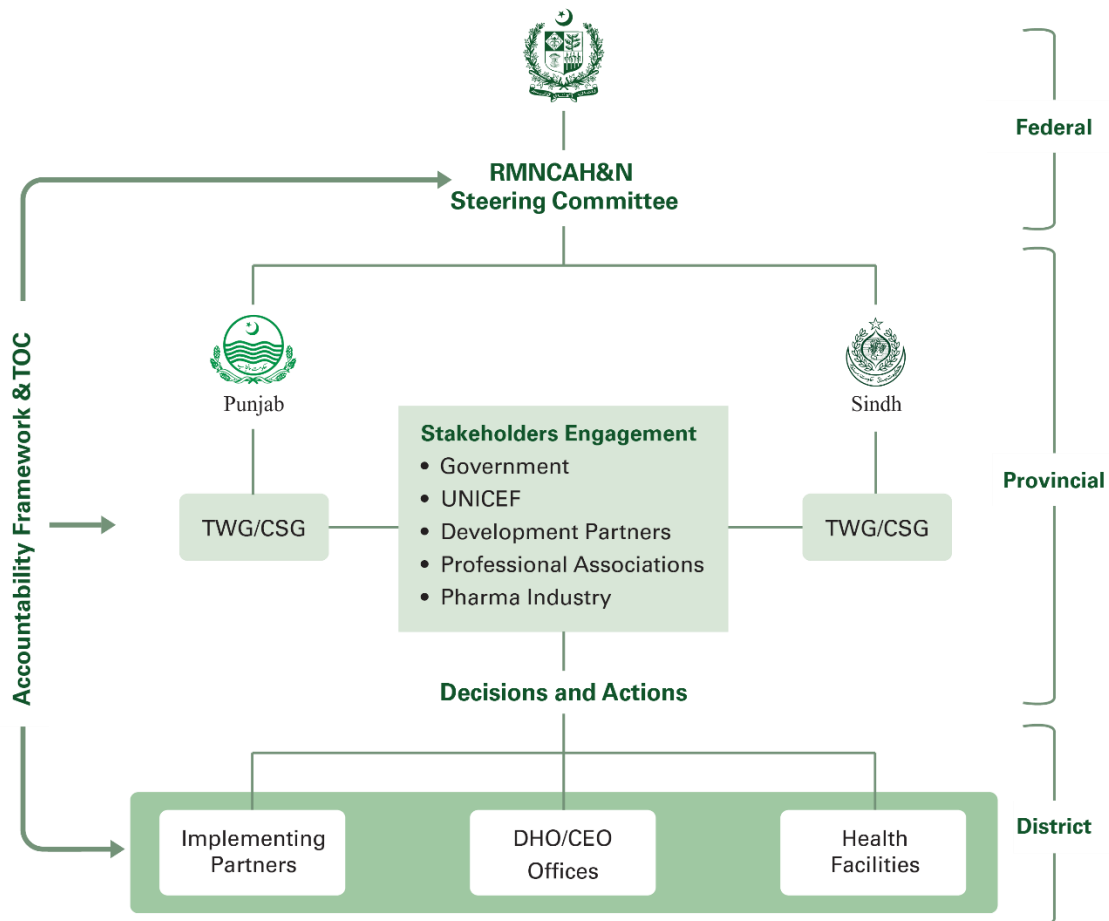
3.1.1. Project Stewardship

P&D Project supported and catalyzed systems and structure at federal and provincial levels to ensure the oversight and coordination for achievement of its outcomes. At the national level, a Project Steering Committee was established under the Ministry of National Health Services Regulation and Coordination (M/o NHR&C) to provide oversight and coordination of project activities. This was later merged into the larger forum of National Technical Working Group (TWG) on Reproductive, Maternal, Newborn, Child and Adolescent Health and Nutrition (RMNCAH&N), which had similar ambit and scope with broader representation from all provinces and federating units of the country and development partners. Through regular meetings, the TWG supported the implementation of project activities and provided an effective coordination mechanism between federal and provincial levels for high-level advocacy and progress monitoring of project outcomes for steering policy changes and policy translation.

In target provinces, provincial governments notified Technical Working Groups on Child Survival (TWG) for providing strategic vision and oversight to the relevant provincial

stakeholders working on child survival. TWGs had representation of government, donors, development partners, including UNICEF, professional associations, pediatricians and pharmaceutical manufacturers. The groups periodically reviewed the progress and made coordinated efforts to ensure availability of updated commodities and resources for providing quality healthcare for every girl and child suffering from Pneumonia and Diarrhea. During the project life, meetings and proceedings of these coordination forums were facilitated, and decisions were translated into actions for updating national and provincial policies. Accountability Framework, entailing level-specific roles and responsibilities, was developed at the inception of the project to strengthen the stewardship and coordination. This was further supported through project Theory of Change (TOC) that was developed during first year of the project and guided the policy processes for achievement of project outcomes.

Figure 9: Project Stewardship



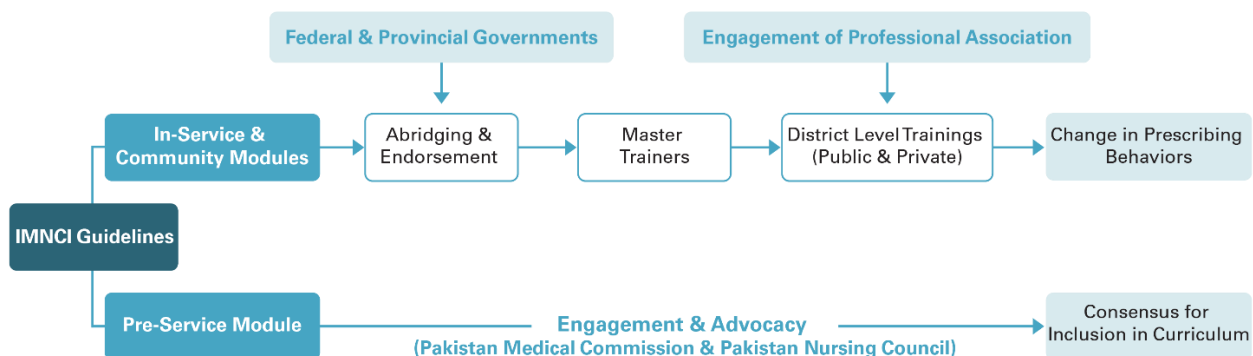
3.1.2. National Guidelines & Capacity Building

A key milestone of P&D Project was updating national guidelines and its implementation for improving the prescribing behaviors of healthcare providers and community health workers.

Evaluation findings revealed that technical assistance was provided to the government in revising pre-service and community IMNCI modules, through engagement of experts. This was carried out in close coordination with WHO and revised guidelines were endorsed and notified by the federal M/o NHR&C Provincial IMNCI TWGs notified by provincial governments reviewed IMNCI modules for healthcare providers and community workers and LHW curricula in adherence to WHO guidelines. During federal level consultations, it was revealed that the project also advocated for inclusion of IMNCI guidelines in curriculum through engagement of M/o NHR&C and regulatory bodies i.e., Pakistan Medical Commission and Pakistan Nursing Council as well as parallel advocacy with Midwifery Associations, professional associations (PPA, PMA) and Healthcare Commissions. Advocacy and technical assistance to Ministry is ongoing to establish mechanism where IMNCI as an integrated approach has been planned to be rolled out through Government own resources. The inclusion of IMNCI guidelines in the RMNCAH&N EHSP through high level advocacy consultative meetings with key stakeholders/institutions is being implemented through UNICEF's own regular funds as an on ongoing support to Ministry as key intervention in UHC Benefit Package. Further, UNICEF from own resources is planning to technically support departments of health in development of endorsed ECD sensitive IMNCI modules for HCPs and CHWs provincial action plans.

Capacities of healthcare providers and outreach workers on updated IMNCI guidelines have been built through the P&D Project in close coordination with professional associations including PPA and PMA. This led to signing of Public Private Partnerships (PPP) MoUs in provinces of Sindh and Punjab, providing a platform for conducting training sessions/orientations at district level for both public and private sector (GPs) on updated management of childhood P&D. The orientations have contributed to changing prescribing behaviors of healthcare providers in promoting the use of updated commodities. The project throughout its five and a half years of implementation emphasized on encouraging scaling up the best practices and lessons learnt to uncovered provinces/areas. National endorsement of IMNCI guidelines was undertaken with involvement of all four provinces through established coordination platform of Provincial IMNCI TWG.

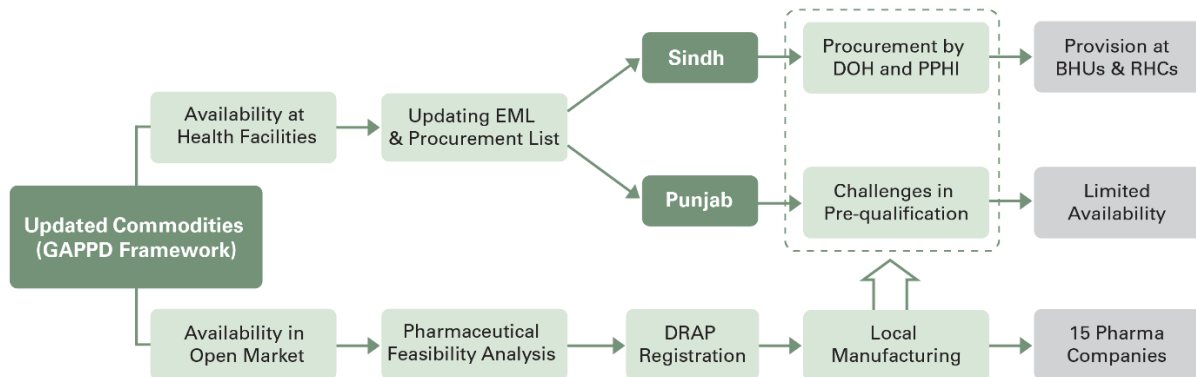
Figure 10: Updating IMNCI Guidelines and Capacity Building



3.1.3. Availability of Updated P&D Commodities

The P&D Project was built on the recommendations of GAPPD framework, realizing the benefits and efficacy in use of updated commodities for improved management of childhood P&D. The project aimed at ensuring availability of essential commodities (Amox DT, Zn DT, co-packaged Lo-ORS and Zn DT, Oxygen, ARI timers, and Pulse oximeters) for treatment of childhood pneumonia and diarrhea. In order to achieve this outcome, evaluation findings revealed that the project supported initiatives for improving local production of updated Pneumonia and Diarrhea commodities to ensure availability in public sector healthcare facilities and open market within reach of private practitioners in the intervention districts. Local manufacturing was encouraged through advocacy and continued engagement with stakeholders including DRAP and Pharma Association at national level under National RMNCAH-TWG coordination mechanism and involvement of five large pharmaceutical manufacturers in Sindh and Punjab TWGs/CSGs. Through dialogue and several rounds of seminars and round table conferences, awareness on the importance of updated commodities was raised. Pharma representatives were invited to TWG/CSG meetings and during orientation sessions for care providers at district level orientations organized with support of PPA and PMA. As a result, the products were included in the revised Essential Medicine Lists (EML) and Procurement Lists paving way to float tender by the respective provincial governments for the local pharma industry and the distribution network. Resultantly, Sindh Government is now procuring both Zn and Amox DT. Review of project's landscape analysis revealed that a comprehensive feasibility analysis was conducted in the initial phase of the project to assess the manufacturing potential for updated P&D commodities. At that time 660 pharmaceutical units were registered with DRAP, which increased overtime to 800 units, located in 12 cities across Pakistan. Only one Karachi based company got approval of DRAP to manufacture Amox DT, while 13 companies were allowed to manufacture Zn DT and 14 to manufacturer Low Osmolarity ORS. Till the end of project duration, fifteen (15) units had the license and capacity to produce the required quantity. Most common factor quoted by pharma industry to influence manufacturing decision was '*profitability*', nevertheless as a result of effective advocacy, pharma industry unanimously agreed to keep their profit margin minimum within an affordable range for everyone. A leading pharmaceutical company however stopped manufacturing P&D commodities, as it found prices set by DRAP exceeded the manufacturing cost. Initially, international procurement was done by UNICEF for the project, which was later on facilitated by locally manufactured commodities procurement in Sindh for the provision at BHUs and RHCs through government and implementing partners (PPHI), however in Punjab, a challenge of pre-qualification of local manufacturers had been faced, resulting in limited availability at health facilities after project mid-term. Representatives of pharmaceutical manufacturers shared their concerns on production of co-packaged Zn DT and Lo-ORS due to variance in requirements of use, storage and formulation and difficulties in its registration with DRAP. Therefore, this remained an unachieved outcome.

Figure 11: Availability of Updated Commodities



3.2. Findings against OECD/DAC Criteria

3.2.1. RELEVANCE

Relevance is defined as the extent to which the project is suited to the priorities and policies of the target group, recipient and donor.

EQ: How relevant and meaningful were the project objectives and activities as per the agreed outlined outcomes of policy change, policy translation and policy implementation in addressing the needs and priorities of the marginalized and vulnerable children in the project areas?

Finding: Project objectives and activities catered to the needs of the marginalized and vulnerable children in project areas.

- Pakistan is third largest contributor to global under5 Pneumonia deaths with 58,000 annual deaths, next to Nigeria and India (UNICEF 2019b).
- Overall, 8% of the U5 deaths in Pakistan are resulting from childhood Diarrhea (WHO 2021).
- Project was implemented in all districts of Sindh and selected districts of South Punjab having highest U5 mortality.
- Provision of updated commodities was mindful of the socio-economic conditions of the pro-poor beneficiaries.

Globally, Pneumonia and Diarrhea (P&D), essentially preventable and treatable diseases, have been the most reported illnesses among children. Pakistan was among countries where under 5 mortality had been very high, therefore the issue of P&D as the two major killers, became one of the top priorities of the government. When the project was initiated, Pakistan was among the top 15 countries in the globe with the highest morbidity and mortality, losing around 91,000 children and 53,300 due to these pneumonia and diarrhea diseases annually (UNICEF n.d). The incidence was however not evenly distributed in the country. Among the two, majority of evidence indicated that diarrhea was a major contributor to child mortality, though still considered to be under-reported for lack of recording in the non-regulated private sector, while in 2021 the most

reported illness as per IRMNCH-MIS data in Punjab and LHW Programme data in Sindh remained to be pneumonia. A key informant in the Federal Ministry during the landscape analysis said that better estimates were needed to be made available with respect to pneumonia, *"The routine reporting system is still not capturing the overall situation that well"*.

The recent DHIS generated data in 2021 also suggested a high burden of pneumonia cases that routinely visited public health facilities, where only a few got standard treatment. The situation was particularly grave in the rural communities and among the under privileged segments in the urban slums. Several predetermining factors were identified, including socioeconomic status (poverty), illiteracy, lack of awareness, population growth, social behavior relying on myths and misperceptions and contamination of environment including water resources.

Keeping in view this context, P&D Project was initiated by UNICEF in 2016 in high burden districts, including all of Sindh and five districts of South Punjab, selected on the basis of criteria set by a technical team having representation from government health department, IRMNCH/MNCH programme and development partners. Maximum weightage was given to the districts having a high reported prevalence of U5 mortality and poor socioeconomic indicators, besides other factors. This was further endorsed by professional associations including PMA and PPA. The need for such an intervention in the selected setting was thus based on the available data and the context within those districts. The relevancy of the project was reiterated by a high-level official at provincial health department, who stated, *"The issue was definitely much bigger in size than what was reported, since many cases were apparently misdiagnosed"*.

The entire focus of the project interventions was on change, translation and implementation of policies aligned to address the recommendations of GAPPD in order to ensure better management of P&D, keeping in mind the socio-economic aspect of the diseases. The interventions within the project were mindful of the pro-poor beneficiaries as incidence of pneumonia and diarrhea was dependent on economic strata i.e., lower the income, higher the incidence.

Post-MTE, the project interventions still remain relevant, particularly in context of Covid-19. A Preventive Pediatrician in a tertiary care hospital and also a member of CSG shared that the emergence of omicron variant caused a rise in Covid-19 pneumonia cases in children. In routine OPD, more than 60% children were being brought with diarrhea, followed by respiratory infections, sore throat and mild to severe nutritional deficiencies during Covid-19 pandemic. There were seasonal variations seen with more cases of pneumonia/ respiratory infections in winter and diarrhea in summer. The project through its emphasis on advocating change in child survival policies, translating them in actions for improved evidence gathering and ensuring implementation at facility level with focus on changing prescribing behaviors according to IMNCI guidelines and enhanced availability and adoption of updated P&D commodities has been able to cause a dent in morbidity and mortality of these two major child illnesses. A key informant at provincial level, while stressing the need to improve quality of data, opined that, *"The risk factors have declined and quality of life improved over the past few years and people have started appreciating the relevance and significance of interventions implemented for saving lives of the children"*.

Federal and provincial stakeholders appreciated the role of this project towards improving P&D related indicators during the last 5 years. One of the implementing partners, while applauding the interventions expressed,

"If we look at recent data of PDHS, it is apparent that situation is improving...also UNICEF did a survey regarding infant mortality which showed a great improvement regarding the morbidity and mortality of these diseases... particularly Sindh has improved a lot regarding infant mortality in the last 5 years".

District level stakeholders, including DHOs, DHIS and LHWs Coordinators also acknowledged that the UNICEF P&D Project provided ample opportunity to address the district level disease burden and childhood mortality, specifically catering to the needs of the poor, marginalized, and vulnerable children, living within the project intervention districts. Further, district stakeholders and facility in-charges also informed that the provision of medicines, supplies and commodities at public facilities is a hallmark of policy translation and policy implementation. Furthermore, community level service providers (e.g., LHWs, GPs, pharmacy/medical store in-charges) and beneficiaries (e.g., mothers of children under 5 years) also found the activities of the P&D Project within their areas to be very relevant to provide effective treatment for P&D and reduce childhood mortality.

EQ: Whether the mechanisms available to create awareness among communities were effectively linked to the project objectives?

Finding: The prime focus of this project has been on policy level interventions, with district and facility level implementation, having minimal emphasis on community awareness and sensitization. However, mainly LHWs and electronic media were involved to raise awareness about use of P&D commodities amongst community.

According to the district, facility and community level stakeholders, P&D Project has however, utilized available means for sensitization and raising awareness, such as using electronic and social media, and engaging local service providers (e.g., LHWs and CHWs). It has been seen that LHWs and CHWs were the main channels for creating awareness for the prevention of P&D and treatment amongst the general community. A provincial-level variation was observed in Sindh and Punjab. A more common use of social and electronic media was mentioned in Punjab for behavior change, whereas in Sindh, this awareness was raised through campaigns, posters, banners, pamphlets, wall-charts and through LHWs. One of the LHW Coordinator expressed, *"LHWs have been instrumental in sensitizing local community through sessions at local levels e.g., in schools and try to create awareness regarding P&D".*

The facility in-charges and GPs working in the community also endorsed the role of LHWs in creating awareness regarding P&D, however, they also highlighted their own contribution in counselling people on using P&D updated commodities, especially DTs. Most of the GPs emphasized the importance of prevention and early diagnosis of P&D for effective treatment. They accentuated the need for community-based awareness, provided through local service providers (both public and private doctors) during medical camps and dissemination of easy-to-

understand pictorial material in local languages. One of the GPs stated, *“Early diagnosis is critical for effective treatment ... Prevention is always better than cure and therefore, awareness is very important, as community must be aware about the prevention and care of these diseases”*. Some of the GPs said that they have seen advertisement/ awareness messages on television, while local organization also distributed the awareness material about P&D in their clinics and community. Almost all LHWs involved in FGDs had awareness material, including charts, posters, brochures, booklets, and pictorial materials to distribute in the community. LHWs however mentioned that they have conducted regular awareness sessions with mothers/caregivers on general health before Covid-19, which were hindered during the pandemic. It was pertinent to mention that during Covid-19, awareness campaign was run to promote hand washing practices only.

Beneficiaries, particularly mothers informed that their main source of information about P&D was either LHWs or electronic media, mainly TV, where they have witnessed different animated videos and announcements. A mother also opined, *“I have heard announcements from nearby mosque and village influential about hand-hygiene and use of clean water to avert diarrhea”*. Another mother explained, *“LHWs used to conduct the sessions on general health, mother and child health, health and hygiene, safe drinking water before Covid-19... where they also taught us how to use ORS sachets”*.

EQ: What was the relevancy of the project with the Federal and provincial Departments of Health, as well as the services being provided by the private sector?

Finding: Project activities and interventions were aligned with federal and provincial policies, and governmental priorities.

- National Health Vision (2016-25) aims to reduce preventable deaths.
- Health Sector Strategies of Sindh (2012-20) and Punjab (2019-28) identify Pneumonia and Diarrhea as major killers and identify strategic actions for their early recognition and appropriate management.
- UHC-Benefit Package focuses on Pneumonia and Diarrhea interventions under ‘Detection and Treatment of Childhood Infections’ with inclusion of updated commodities (DTs, Lo-ORS, Co-packaging) as part of the endorsed Essential Packages of Health Services (EPHS) for PHC & Community.

Adopting a holistic systems approach, UNICEF’s P&D Project activities and interventions were designed to support the federal and provincial governments’ agenda of child survival through minimizing the childhood illness related to P&D, focusing on the disadvantaged and marginalized children. UNICEF project team consulted national and provincial level strategic documents, such as National Health Vision (2016-25), Provincial Health Sector Strategies for Sindh (2012-20), and Punjab (2019-28) to translate their priorities and strategic actions for early recognition and management of P&D into the project interventions. Further, the project also sought guidance from the Universal Health Coverage (UHC) – Benefit Package (BP) at national level, particularly focusing on P&D interventions under *‘Detection and Treatment of Childhood Infections’* besides basic interventions. This is being implemented in both the provinces at the primary health care

facilities. With effective advocacy, updated commodities have been included in the revised Essential Medicine List (EML) and endorsed in Essential Packages of Health Services (EPHSs) for PHC & Community in both Sindh and Punjab. Further, the desk review revealed that the EPHS has become a cornerstone of the 12th Five Year Plan (2018-2023) Health chapter and the National Action Plan (2019-2023) for Pakistan's health sector. In other words, UNICEF supported the government through its technical expertise and integrated health interventions in Pakistan to improve prescribing behaviors to combat childhood mortality, focusing on two major killers, i.e., Pneumonia and Diarrhea. According to federal stakeholder, *"project always had ministry's blessings as its objectives were aligned strategically with government priorities, particularly those specified in National Health Vision (2016-25) for coordinated priority action, digital Pakistan policy, Health Sector Strategies of Punjab and Sindh and Universal Health Package based on Minimum Service Delivery Standards (MSDS)"*. Another federal level stakeholder shared,

"Pneumonia and Diarrhea had always been on the government's radar but it needed technical and financial support to proceed forward in implementing its reform agenda. So, UNICEF bridged this gap... Overall, the project's objective of 'Accelerating policy change, translation and implementation for P&D commodities' is consistent with the Government's priorities".

Another example of alignment of UNICEF's project activities with the agenda of the government and private sector was the updating of IMNCI guidelines to promote better healthcare practices and behaviors to help the children survive and thrive. There was a need to upgrade IMNCI manual as per the latest WHO/GAPPD recommendations, which was rolled out in Pakistan back in 1992. The federal government updated IMNCI guidelines in consultation with all the stakeholders in 2016 and prioritized implementation of these guidelines at the primary health care level for improving P&D management as one of the key initiatives to deal with the U5 children mortality. UNICEF facilitated this process with the government and developed trainings' curriculum for pre-service and community levels based on revised IMNCI guidelines. Subsequently, trainings were planned and supported for the community, medical/nursing students and staff at health facilities. Currently digital health platform is being developed for online trainings on IMNCI for frontline health workers.

A key Informant of Punjab Health Department informed in this regard,

"Combating childhood illnesses inclusive of P&D had always been among the topmost priority of the DOH for many years... and it has invested a lot on improving resource availability and service delivery at all levels. To implement updated IMNCI guidelines, it organized trainings of service providers and ensured availability of globally recommended commodities, i.e. Amox DT and Zn DT, Lo-ORS, Pulse Oximeters, ARI timers, and Oxygen with support of UNICEF in first-level facilities. However, there is need for improving standard of medical education, strengthening clinical acumen, skills and work ethics for optimum results".

In view of key stakeholders, the project facilitated the health departments in updating IMNCI guidelines and keeping it on track to improve P&D case management while adhering to globally

accepted standards. *“Capacity building of staff/care providers remained one of the key initiatives of the project”*, said a key informant from UNICEF.

The RMNCH Department of DOH informed, “Trainings for primary care facility staff and outreach workers (LHWs) in all its districts were conducted with support of UNICEF on updated IMNCI guidelines based on WHO/GAPPD recommendations”

Recognizing the significance of the private sector, UNICEF P&D Project engaged with private sector, which covers over 60-70 percent of population in Pakistan. Both public and private sector care providers at the district level were trained, including General Practitioners (GPs) by master trainers, who were mostly experienced Pediatricians.

Provincial stakeholders at Punjab further highlighted, “the department did not find any issue in implementing most of the project’s activities and interventions..., since it found that project’s overall objectives were aligned with the departmental policy to which it was already committed since long time”. The members of technical working group (TWG) also endorsed this viewpoint. Furthermore, the provincial stakeholder at Sindh also opined that the project’s activities and interventions designed for combating pneumonia and diarrhea were also aligned well with Sindh Government’s child survival policies. The same were also validated by CSG members. The DHOs at Punjab and Sindh unanimously agreed that P&D activities are fully aligned with their provincial-level health policies and sector strategies. At community level, the project supported by provision of 3010 ambulance service to cater for sick children as well as mothers for ensuring timely referral, treatment and management.

EQ: To what extent the objectives of the project were consistent with the existing national/provincial policies and guidelines (particularly Pakistan government recently endorsed UHC BP) in line with global recommendations (WHO/GAPPD) for management of P&D among under five children in Pakistan and are sustainable?

Finding: Objectives of project were fully aligned with global recommendations for management of childhood Pneumonia & Diarrhea in Pakistan.

- Project interventions were based on Global Action Plan for Pneumonia and Diarrhea (GAPPD) for averting preventable and treatable deaths.
- Pakistan’s SDG commitment (3.2) to end preventable deaths of newborns and children under 5 years of age by 2030.
- Evidence and model packages around childhood illnesses based on UHC and Disease Control Priorities Edition-3 (DCP-3).
- P&D Project adapted global IMCI strategy of WHO/UNICEF and revised IMNCI guidelines in local context.

In order to address the leading causes of child death and to reduce the massive burden of pneumonia and diarrhea deaths among children in a consistent manner, in 2013, UNICEF and World health Organization developed the Integrated Global Action Plan for Pneumonia and Diarrhea (GAPPD) – the first global policy to set national pneumonia and diarrhea mortality targets. The GAPPD framework was built around the concept of prevention, diagnosis and

treatment services which recommended increasing coverage of pneumonia-fighting vaccines, access to recommended treatments and updated commodities including pulse oximeters, ARI Timers, oxygen, ORS and Zinc.

Pakistan being one of the largest contributors towards preventable child mortality was recommended by global community to prioritize their health interventions aimed at improving child survival. UNICEF with the support of BMGF thus initiated the project "Accelerating Policy Change, Translation and Implementation for Pneumonia and Diarrhea Commodities in Pakistan" in 2016 with its foundation based on recommendations of GAPPD and interventions fully aligned to cater to its three components "*protect, prevent and treat*". The emphasis of the objectives had been on averting preventable and treatable U5 deaths in children. To address the challenges leading to U5 P&D mortality, P&D Project developed theory of change through evaluability assessment at the inception. The activities carried out under this project also catered for related national commitment towards attaining Sustainable Development Goal (3.2) ensuring healthy lives and promoting wellbeing for all, particularly ending preventable deaths of newborns and children under 5 years of age by 2030. This alignment was endorsed by the senior official at provincial health department, who remarked, "*Project's interventions for management of childhood Pneumonia & Diarrhea were in line with health department's goals and also aligned with the global recommendations and SDGs*".

The key interventions based on global recommendations encompassed inclusion of updated commodities in EML and procurement list, such as Amox DT Zn DT, low osmolarity ORS and pulse oximeters, oxygen in public sector primary level health facilities as well as strengthening service delivery through provision of necessary equipment (i.e., ARI Timer) to outreach workers to facilitate early diagnosis by and to be able to make timely referral. In addition to GAPPD, one of the key activities of updating of national IMNCI guidelines for the management of pneumonia and diarrhea was associated with global IMCI strategy. To support implementation, capacity building of service providers was also done involving both public and private sectors providers on revised IMNCI guidelines. Also, public sector information system got strengthened, reinforcing efforts for DHIS2 implementation.

UHC efforts led to inclusion of IMNCI as a key RMNCAH&N intervention to combat under 5 mortality. Inclusion of updated commodities in EML had been a continuous advocacy efforts of the Project. Further, based on Disease Control Priorities Edition 3 (DCP3) recommendation, interventions were prioritized on the basis of evidence including disease burden, cost of intervention, efficacy, feasibility, budget impact and social context. The advocacy efforts of the project influenced the inclusion of P&D commodities in Essential Package of Health Services by the provincial stakeholders. Key informants within Federal Ministry and Provincial Governments and representative of PPA acknowledged that interventions promoted by UNICEF within the project had proved to be efficient and cost effective in dealing with P&D. A Federal Ministry stakeholder commented, "*From a global perspective, this project contributed in fulfillment of SDGs as it improved the quality of life of children and their health status*".

With the addition of priority P&D related interventions as part of the universal health coverage benefit package (UHC-BP), this project has also supported universal health coverage by reaching

out to vulnerable and marginalized children mostly living in the rural communities through the LHW programme and the primary healthcare facilities. A national level stakeholder opined that although this project did create the right kind of momentum, it still required more effort on policy translation and implementation by the provinces through knowledge management attained so far to complete the unfinished agenda for meeting SDGs by 2030. A key informant within Ministry highlighted the support of the project towards efforts for attaining global commitments, *“UNICEF played a vibrant role and appreciable support in policy formulation and aligning our approaches with standards set under GAPPD, SDGs and international best practices.”*

EQ: Whether the project has been able to well adapt to the changing context and remain relevant, particularly related to Covid-19?

Finding: P&D Project re-strategized their interventions to adapt to the changing scenario during Covid-19 pandemic, using innovative solutions like remote orientations and meetings, and celebrations of special days with global reach.

P&D Project made a shift from physical to the virtual environment during the pandemic. Federal stakeholders informed that during the initial period of project, frequent physical TWG meetings were held, however, during pandemic, UNICEF team has engaged them in continuity of the project activities through use of virtual platform. Some of the provincial stakeholders also mentioned slowing down of activities during the last 2 years, where social media and other sources, including professional associations (PPA, PMA) facilitated the project in reaching their milestones. Further, they reiterated that trainings at district level were already completed before Covid-19.

A senior Pediatric specialist appraised the role of UNICEF, especially during Covid-19 and stated, *“UNICEF did a great job regarding the capacity building... even during Covid-19 there were trainings and workshops”*.

The UNICEF project team highlighted the challenges faced by them during the pandemic, shared how it compromised their routine project activities, and the re-alignments made to the project to cope with the situation. The project during the last 2 years have gradually revitalized the agenda, emphasizing the need to refocus, considering the number of deaths caused by P&D during the pandemic (especially in children under 5), was more than those caused due to Covid. A KI informed, *“The focus of emergency-related work shifted to deal with Covid-19 situation, the project ended up taking a bit of a back seat... priorities changed”*.

Federal and provincial stakeholders mentioned the project activities such as advocacy, coordination and implementation at district levels were affected by the pandemic. . Special mention was of delay faced in rolling-out of DHIS2 in the province of Sindh. One representative at federal level explained, *“Covid-19 led to delayed implementation and lack of concentration on the project... the coordination role of the government was weakened, and it did lead to some activities not being carried out as planned”*. Advocacy activities were affected as well since face-to-face communication was hindered greatly, and all this brought some disturbances to the project, however, UNICEF team availed online communication mediums to ensure continuity. Majority of the project interventions had already been completed with the exception of a few

activities, particularly, the main cause of taking no-cost extension was the roll-out of DHIS2 – labelled as one important need of the province. UNICEF project team member shared, “ *We got no-cost extension in 2020 and 2021 during Covid. However, by 2019 we had completed 90% of the activities and deliverables that were agreed upon with the donor*”.

In a nutshell, delayed implementation and limited coordination although caused difficulties in advocacy and moving the agenda point forward, yet the project was able to make use of social media communication with the involvement of UNICEF’s social networks and channels. Special days, like World Pneumonia Day was celebrated virtually with the global reach of more than 1 million national and international participants, bringing the P&D agenda to the forefront.

3.2.2. COHERENCE

Coherence is determined with the compatibility of the UNICEF's project interventions complementing those implemented by the government, coherence of design and delivery in line with international standards.

EQ: Were the strategies or approaches realistic, appropriate, and adequate to achieve its desired goal and results?

Finding: While project strategies were realistic, there were mixed views about appropriateness and adequacy of approaches.

- Realistic interventions led to the achievement of all planned activities, with exception of interventions requiring no-cost extension in 2020 and 21, which were not part of the initial scope, like DHIS-2.
- Most of the project activities were appropriate to local context except reported hesitancy among project beneficiaries in the use of dispersible tablets.
- Coverage of the project was not adequate to make a remarkable dent in childhood mortality as majority districts of Punjab and entire provinces of Khyber Pakhtunkhwa and Balochistan were not covered.

The federal and provincial stakeholders altogether showed positive opinions regarding logical and realistic project strategies to avert childhood mortality in the province of Sindh and Punjab. It is evident from the fact that most of the project planned activities were accomplished within the stipulated timeline, except for a few which required no-cost extension in 2020-21. A key informant at a senior government position remarked, “ *My qualitative opinion about the usefulness of this project is very much affirmative*”. A key respondent of the Punjab Health Directorate affirmed, “ *P&D Project initiatives were realistic and aligned with health department’s goals as well as GAPPD and SDGs guidelines*”.

Regarding realistic project strategies, stakeholders highlighted five basic pillars of the project, including advocacy with policy and decision makers and pharmaceutical companies, capacity building of care providers/health workers on updated IMNCI modules, revision and updating of IMNCI guidelines as per global recommendations, inclusion of updated commodities in the EML for primary health care facilities, procurement list, PC-1 and Essential Package of Health Services

(EPHS) of both the provinces and implementation of DHIS 2 to get real-time data. Analysis revealed that most of these strategic activities were completed in time, however, real-time information sharing between provincial and district management about the implementation status of interventions and community feedback remained deficient and needed improvement for timely mitigation of field challenges and course correction. The same view was also shared by a stakeholder, who said, *“we would have improved project implementation and thus its outcome, had we been able to monitor the activities through real-time measurement of compliance in the field, to ensure its effectiveness”*.

Recognizing the UNICEF’s efforts, representatives of the Provincial Health Departments and CSG members appreciated the project’s systems strengthening approach, especially in terms of the provision of essential equipment, sufficient supply of commodities for healthcare facilities and outreach workers, and IEC material for making this project successful. Further, stakeholders also valued the rigorous research and continuous consultation with key stakeholders. As a key respondent of RMNCH commented, *“One reason for the success of project was the selection of realistic implementation strategies, developed in consultation with all stakeholders that made project truly viable”*. Furthermore, a senior CSG Member of Sindh endorsed, *“the commodities introduced via this project were developed on the basis of research and best practices”*. The same is also evident with the introduction of DTs, as a Member of PPA Punjab and a practicing Pediatrician shared the results of the pilot study to compare tolerability of syrup versus dispersible formulation of Zinc in 2017, and informed, *“dispersible tablets were as good as syrups, however, DT formulation had a slight edge over syrup in terms of convenience of transportation and storage”*.

Amid the realistic project approaches, mixed opinions were found in terms of the adequacy of these approaches. Stakeholders opined that the project’s geographical coverage was not adequate to make a remarkable dent in childhood mortality at the country level, as the majority of districts of Punjab and entire provinces of Khyber Pakhtunkhwa and Balochistan were not covered. As shared by one of the KI at the federal level, *“We have gained momentum in these two provinces (Punjab and Sindh) but it is not about the children of these two provinces only... (there is) unfinished agenda for rest of Punjab and other provinces too”*. This viewpoint recommends the need for replication and scaling-up this project in other provincial/regional settings, highlighting the acceptability of project activities.

Similar to the adequacy of the project strategies, varied views were recorded regarding the appropriateness of the project approaches in the local socio-cultural setting, particularly for the use of ARI Timer and DTs. For instance, with the support of UNICEF, equipment for the management of P&D and commodities for the short-term period was provided for ensuring smooth service delivery and getting optimum results. On one hand, a senior Preventive Pediatrician stated, *“ARI Timer helps in making accurate measurements of Respiratory Rate, whereas, LO ORS is much safer for U5 children and it reduces the rate of vomiting”*. However, on the other hand, a senior Pediatrician and PPA member, while endorsed the value of Lo-ORS in children, did not consider ARI Timer useful in the local context and said, *“Although ARI timer*

is useful, its usage by LHWs is inconsistent... Moreover, can be readily replaced by a smartphone..."

Keeping in view the mindset of local communities, some of the federal and provincial stakeholders commented to invest more in cost-effective health promotion activities, instead of the purchase of equipment. As one of the informants suggested, *"...money thus saved may be spent on the provision of clean drinking water and promoting hygiene for improving child survival"*.

Stakeholders also viewed that most of the project activities were appropriate to the local context, nonetheless, issues for dosage of Dispersible Tablets (DTs) were reported. As a senior CSG Member shared, *"...we had problems with the administration of proper dosage previously that was solved with the introduction of the dispersible tablets"*. More significantly, hesitancy among project beneficiaries for use of DTs was reported, as provincial informant stated, *"...community's behavior is still more tilted in favor of syrup compared to DTs"*. Similarly, district-level stakeholders also reported the preference for syrups and hesitancy about DTs use in general populations. A pharmacy/medical storekeeper informed, *"parents are more satisfied with syrups than DTs..."*.

In sum, the project has opted the realistic strategies, based on thorough planning, rigorous research, and continuous stakeholders' consultations, however, limited geographical coverage challenged the adequacy of the project's impact, coupled with use of innovative approaches (e.g., ARI timers and DTs), lack of providers' ability to use innovative approaches and their acceptability affected the appropriateness of approaches with predominately rural cultural settings of Pakistan.

EQ: To what extent UNICEF's project interventions complement those implemented by the government?

Finding: UNICEF's project interventions were complementary to government agenda at all levels.

- The project augmented service delivery at healthcare facilities and community through innovative approaches for Pneumonia and Diarrhea for improving clinical management practices of health care providers at public and private sector facilities.
- Support was channeled towards government's vision to digitize its information system and rolling out of DHIS-2.

In order to support the Government's agenda of child survival, UNICEF P&D Project strived strategically to end preventable P&D related deaths in Pakistan. UNICEF designed project interventions to achieve the national health vision, provincial health policies, and sector strategies to reduce childhood mortality. As narrated by a Provincial Government Representative, *"Pneumonia and Diarrhea are among top priorities and the government is investing a lot in improving resource allocation for improving service delivery at all levels to combat childhood illnesses to attain National Health Vision"*. Further, UNICEF's P&D Project interventions complemented the government agenda at all levels; federal, provincial and district. In the words of key informants of the Federal Ministry, *"...we did not start from the scratch, but*

this project helped us building upon the gains we achieved over time, translating our vision into reality”.

The project adopted a multi-pronged strategy to strengthen health system and support the federal level Ministry of National Health Services Regulation and Coordination in Islamabad (M/o NHSRC), Provincial Health Departments, Offices of District Health Officers (DHOs), health facilities, and outreach workers in targeted districts of Sindh and Punjab. At macro level, UNICEF Pakistan facilitated the Government of Pakistan and provincial governments in reducing P&D cases amongst children U5 through evidence-based research and policy change to implement GAPPD and procurement of essential medical supplies for prevention/treatment. At meso level, UNICEF ensured the availability and logistics of the essential medical supplies within the targeted districts/communities. At micro level, UNICEF built capacities of healthcare providers to support in implementation of the Government’s P&D initiative.

Analysis of ETE revealed that support of UNICEF to government policies had been consistent in all interventions linked with child survival at all levels, whether it was for P&D, Nutrition or Child Vaccination. Federal and Provincial governments were facilitated in almost all processes linked with P&D project from policy advocacy, policy change and translation to implementation and knowledge management. UNICEF, along with WHO, provided technical support to federal and provincial health departments, for updating/institutionalizing IMNCI protocols/guidelines and preparing abridged training curriculum, updating DHIS and piloting digital platform for IMNCI database, developing Training Modules and Action Planning, providing essential equipment (ARI Timer, Pulse Oximeter, Oxygen concentrator and cylinders), and organizing trainings. (Nutrition International provided technical support in trainings relating to diarrhea management in few districts of Sindh and Punjab). In view of one stakeholder, *“Such initiatives generate an evidence base to refine our policies. It aids to increase the awareness and capacities of the healthcare providers to overcome gaps...”*. The project supported to improve service delivery at healthcare facilities and community through improving clinical management practices of health care providers in both public and private sectors. However, need was felt for enhancing scope of IMNCI trainings for postgraduate level as a stakeholder representing CSG and a tertiary care institution commented, *“There is a need to enhance the scope of IMNCI trainings for the postgraduate trainees to improve clinical case management”*.

Further, to make certain that updated commodities are available in the public sector, UNICEF supported inclusion of updated commodities in the revised EML and EPHS of both the provinces. As endorsed by a representative of RMNCH, *“UNICEF provided equipment (ARI Timer, Pulse Oximeter and oxygen cylinder and concentrators) as well as updated commodities for the initial few months to the intervention districts to improve P&D case management in the primary healthcare facilities”*. In Punjab however, the decision to procure dispersible antibiotics for LHWs was reversed due to a reported increase in the incidence of antibiotic resistance. No separate budget was considered necessary by the provinces for purchase of newer commodities or for repair and maintenance of the equipment supplied by UNICEF.

District level officials also endorsed the efforts of UNICEF P&D Project for prevention and treatment of P&D among children, and improving child health situation at the district and health

facilities level. One of the DHOs emphasized the importance of usage of new commodities for P&D management for improving clinical practices, and stated,

“low cost and lifesaving commodities and devices, such as Amox DT and Zn DTs, Lo-ORS, ARI timers and oxygen oximeters are evidence-based high impact interventions to decrease under-five mortality in Pakistan, which helped to improve the health indicators over time.”

One of the major milestones of UNICEF’ project was to support the government’s vision to digitize the health information system and rolling out of DHIS-2 to facilitate data collection on new health indicators (e.g., age and gender disaggregated data) and promote real time monitoring. In order to enhance the preparedness of the country for the transition from DHIS-1 to DHIS-2, UNICEF designed interventions and facilitated the government for upgradation of DHIS2 within the targeted districts. UNICEF sensitized policymakers and decision-makers for rolling out of DHIS2. Analysis revealed a provincial variation in rolling out of DHIS2 for real-time reporting, as it is being implemented in Punjab, however, not in Sindh.

A provincial informant in Punjab reported, “DHIS2 is functional in Punjab... all the required P&D commodities are listed in the DHIS2 Monthly Medicine & Vaccine Reporting Form, including Zinc syrup, which were not present in DHIS earlier”. Another provincial stakeholder stated, “with the assistance of UNICEF, DHIS2 has been implemented in 5 intervention districts of Punjab... hands-on trainings on DHIS2 has also been completed in 14 more districts of Punjab, including intervention districts”. Provincial officials in Punjab also informed that data on DHIS2 is being reported and monitoring is being done to assure data quality. Contrary to Punjab, DHIS2 has not been rolled out in Sindh, as shared by a provincial informant, “DHIS 2 is not implemented yet in the province... Its design has been finalized and soon we will start its piloting with the support of the UNICEF”. Regarding reporting against P&D indicators, another provincial official highlighted, “...we got dispersible tablets for Zinc and Amoxicillin, Lo ORS and other commodities with the help of UNICEF... and these commodities have been included in our regular reporting systems in section 11”. Additionally, provincial stakeholders in Sindh also informed that UNICEF provided support for trainings on DHIS2, and further support will be required to roll out DHIS2 for efficient reporting in the province.

EQ: To what extent were external factors (political stability/instability, population movements, emergency context etc.) considered in the design and delivery of the intervention?

Finding: Project identified external factors at the inception followed by course corrections during implementation.

- Key assumptions were identified in Project’s Theory of Change.
- External risks in local manufacturing of updated commodities were highlighted during Pharmaceutical Feasibility Analytics.
- Disruption due to Covid-19 was not anticipated.
- Innovations were applied for mitigating risks, including use of social media.

UNICEF P&D Project adopted a methodical approach from its inception to its conclusion, and identified the potential external risk factors, influencing the design and delivery of the project activities. In this regard, a 'Theory of Change (TOC)' for the project was developed, based on the 'Evaluability Study' and 'Landscape Analysis', pertaining to policy change, translation, and implementation. Later on, this TOC was revised during the project midterm evaluation (MTE), based on findings and consultation with key stakeholders to achieve the project outcomes supporting child survival in Pakistan. TOC was built upon to address the external factors, which included political instability, limited commitment of health departments, lack of private sector involvement, and insufficient skills of healthcare providers to use new commodities and supplies. Further, external risks in local manufacturing of updated commodities were highlighted during 'Pharmaceutical Feasibility Analytics' – a part of Landscape Analysis. TOC defined engagement assumptions and change pathways to manage the external factors to ensure smooth implementation of interventions. These included engaging with political leadership and M/o NHR&C, promoting provincial Health Departments' commitment and ownership of activities, mainstreaming of the private sector for building capacities in the management of P&D in children, and focusing on vulnerable populations through advocacy and social mobilization. However, it is pertinent to mention that TOC was designed and revised before the pandemic of Covid-19, hence the disruptions due to Covid-19 were not anticipated which halted project activities for a very short span of time, as one of UNICEF project team members shared, *"Covid-19 was a difficult time for the project, as everything was halted. Though most of the UNICEF project activities were completed before the Covid-19, our team re-strategized to assure pace of the project activities"*.

All health system strengthening initiatives of the national and provincial governments, including implementation of this project were affected by Covid-19. Project had completed 90% of all activities and deliverables agreed upon with the donor by 2019, but to compensate for delays in conduction of some activities, no cost extension was deemed necessary. As mentioned by one stakeholder, *"Service delivery was severely affected at all levels, particularly during periods of lockdowns"*. District official also commented, *"Covid-19 or we may say the 'lockdown'... halted all the activities at community level"*.

A positive impact of preventive practices for Covid-19 (as hands' washing and social distancing) was also observed on P&D prevalence, but it only benefited a small segment of the urban population. The low prevalence of P&D reported during lockdowns may also be partly attributed to deficient reporting. Covid-19 affected Advocacy, few TWG meetings and training/orientation sessions on IMNCI or DHIS2, which were delayed or conducted on virtual platform rather than physically, however supplies remained un-interrupted.

Advocacy was an important component of the project, which was well catered during project implementation. Strong advocacy was required with the policy and decision-makers for inclusion of updated commodities in the EML, procurement list and in the essential package of health services. Provincial stakeholders opined about the effect of rotation of officials on advocacy, as a provincial key informant highlighted, *"Frequent postings and transfers of key government officials affected the continuity of advocacy efforts with government and health departments"*.

A major factor of this project was the implementation of behavior change activities. The project had already anticipated at the inception phase and during MTE that significant time and continuous efforts would be required to change prescribing behavior of service providers and convince them to prescribe dispersible formulations in place of syrups for effective management of P&D. On the part of beneficiaries, their acceptability for DTs and preference over syrups also remained a challenge. The project well catered to these challenges and adopted the innovation mitigation strategy through social media channels along with IEC material to promote the use of DTs among general communities. As one of the informants explained, *“Social media provided a platform to propagate the P&D commodities at a larger scale and in a more effective manner”*.

The analysis also found another challenge for the project, i.e., engagement of the pharmaceutical industry for manufacturing DT formulations, which do not offer an attractive monetary incentive. At the end of the project, only limited advancement has been seen on the pharmaceutical front for various reasons, which require attention.

EQ: To what extent was the intervention design and delivery overall in line with international standards and principles?

Finding: Taking guidance from the international standards of GAPPD, Disease Control Priorities – Version 3 (DCP-3) and WHO’s recommendations, UNICEF carried out informed project designing, strategic planning, and implementation.

Adhering to the international standards and principles, UNICEF designed and delivered P&D Project activities in an integrated and cohesive manner, taking a system strengthening approach for policy change, policy translation, policy implementation, and knowledge management. Based on desk review and qualitative analysis, it has been found that UNICEF project adapted international norms and practices aligned with GAPPD, DCP-3 and WHO’s recommendations related to Early Childhood Diseases (ECD) sensitive IMNCl guidelines, inclusion of IMNCl in UHC Benefit Package, digital policy and incorporation of Amox-DT, Zn DT and Lo-ORS in Essential Package of Health Services. UNICEF adopted informed project designing, strategic planning, and implementation, supported by evidence, analytical rigor, continuous monitoring, and third-party evaluations. For this purpose, UNICEF laid great emphasis on strategic planning, linkages of project activities with the government’s national and international commitments, advocacy with policy/decision-makers, multi-stakeholder engagement, community involvement, and accountability.

As one of the UNICEF representatives shared, “every effort has been made to comply with the international standards for providing a holistic understanding of project activities, their implementation and monitoring for achieving the planned objectives and adopting mitigation strategies for making this project a success...”.

Analysis revealed that UNICEF team clearly spelled out the project goal, objectives, and scope during designing phase to bridge the existing policy and programmatic gaps, causing under 5 mortality in the country. UNICEF explicitly captured these gaps in the project proposal and other related documents to improve child health, such as lack of updated national health policy and

supporting policies for newly recommended commodities for P&D management, variations in service delivery standards, and limited capacities of healthcare providers to use newly commodities. In order to promote the child survival agenda in Pakistan, P&D Project designed and planned a series of inter-related strategic level activities to achieve project objectives, which were executed in an effective and efficient manner within a specific time frame and cost, to promote enabling environment for policy change and implementation. UNICEF team initially prioritized the requisite strategic actions and defined project outcomes, in consistent with the country's plans and commitments, and subsequently translated these actions/activities into annual plans. Further, the UNICEF team mapped and utilized the available resources, and performed planned activities with vigilant accountability and evaluations to bring change in the lives of local communities within the targeted districts. The project strongly recognized the significance of regular monitoring and evaluations, to get useful feedback and timely information, enabling project management and stakeholders to take stock of the situation and assure quality. Project evaluations were invariably performed by externals at a wider level with the active participation of project management teams and all relevant stakeholders, on regular intervals, i.e., midterm, and end-term. One of the project team members endorsed, *"project monitoring and evaluation proved as a critical tool for quality assurance...to serve interests of both planners and management, particularly for timely completion of activities within the given cost and timeline"*.

Taking forward the international standards, UNICEF project management and implementation units were established with federal and provincial presence. These units strived hard to perform the outlined activities and also facilitated the government-led coordination mechanisms, including government, and relevant child health implementing partners, e.g., WHO, USAID, AKU. Further, technical working groups were established for stock-taking with regular review meetings/discussions. Overall, this project provided a roadmap for national and provincial governments to plan and implement policies and integrated approaches for the prevention and treatment of P&D in Pakistan. Furthermore, P&D Project also recognized the community voices to be heard through the involvement of front-line workers and vulnerable communities. Provincial stakeholder in this regard commented, *"... the effective engagement of all relevant stakeholders... from top to bottom... is a hallmark of this project"*.

Altogether, UNICEF P&D Project adhered to the international standards, and clustered focused interventions to change/revise relevant policies, create enabling environment, enhance knowledge and skills of frontline workers, ensure access to proven and appropriate P&D treatment, and promote healthy practices to protect children from P&D disease. This was achieved through coordinated and collaborative efforts of multi-level stakeholders. One of the UNICEF representatives stated, *"Reaching every child ... and targeting proven interventions to prevent and control P&D ... was a key of UNICEF's project"*.

3.2.3. EFFECTIVENESS

Effectiveness measures the extent to which an activity attains its objectives. In evaluating the effectiveness of P&D project, achievement of objectives achieved and major factors influencing the achievement or non-achievement of the objective were evaluated.

EQ: To what extent the project has achieved its objectives/outcomes and what were the major factors influencing the achievement or non-achievement of the objectives/outcomes especially keeping in Covid-19 pandemic crisis context from MTE onwards?

Finding: Project achieved its intended objectives for improving child survival in Pakistan. Delayed activities were implemented through no-cost extension.

- Provision of updated commodities at health facilities through inclusion in essential medicines list, procurement lists and government's purchase orders
- Local manufacturing of updated commodities
- Pre-service and community IMNCI guidelines
- Capacity building of community and facility (public and private) staff
- Updating DHIS tools and roll-out of DHIS2
- Strengthening of supply chain management through HLMIS

UNICEF P&D Project adopted holistic systems strengthening approach and endeavored to improve the health of children in Pakistan in general, and Sindh and Punjab in particular. Results showed that the project achieved its intended objectives and contributed to child survival in the country, particularly through improving the diagnosis and treatment of P&D amongst children under 5 years.

Recommendations from baseline studies including landscape analysis, supply-chain analysis and budgetary gap analysis (2016) and subsequently lessons learned from midterm evaluation (2019), the project adopted course-correcting actions to ensure smooth implementation of the project activities. Specific actions included involvement of professional associations in advocacy and capacity building for private practitioners, engagement of pharma industry and drugs distribution networks in local manufacturing and shifting towards digital environment using DHIS2 in target provinces and advocacy through national platforms for replication in uncovered provinces and regions of Pakistan. Similarly, during pandemic (2020-21) and lockdown, the project team re-strategized the implementation modalities to ensure continuum of project activities. A federal level key informant stated, "*UNICEF played a vibrant role and appreciable support in policy formulation and aligning our approaches with standards set under GAPPD, SDGs and international best practices*".

- Pneumonia and Diarrhea commodities at health facilities

One of the key outcomes of P&D Project was to translate the policies into actions for ensuring availability of essential commodities to treat U5 Pneumonia and Diarrhea at the primary healthcare facilities where catalyzing supply chain improvement and commodity availability (Outcome 3) was a major initiative of the project. In order to achieve its outcome, UNICEF during baseline Landscape analysis (2016) gathered evidence and recommend steps for the inclusion of

P&D commodities (Amox DT, Zn DT, Co-packaged Lo-ORS and Zn DT Pulse Oximeters, and Oxygen) into essential medicine lists and procurement lists.

To support the provincial governments of Sindh and Punjab, UNICEF procured and distributed the P&D commodities between 18-24 months of the project from 2017 to 2019. Accordingly, Pulse Oximeters, Oxygen concentrators/cylinders, and ARI timers were provided to intervention districts. As a provincial stakeholder informed, *“UNICEF provided us with the commodities and equipment (ARI timers and pulse oximeters).at government facilities”*. It was also endorsed during MTE, highlighting that the project facilitated widespread consultations at central and provincial levels to review and update existing lists for appropriate service delivery, with the inclusion of revised commodities for management of childhood P&D. A representative from UNICEF shared,

“Before this project was initiated, updated commodities for treating pneumonia and diarrhea in U5 children were seldom found in the public sector health facilities and at outreach workers levels... at such a large scale or in the open market of the intervention districts”.

A federal stakeholder also opined, *“Project enhanced awareness among the stakeholders for the effectiveness of the updated P&D commodities. Similar is the situation regarding availability and use of essential equipment (ARI Timer, Pulse Oximeter, Oxygen)”*. Another provincial informant highlighted, *“P&D Project was able to achieve its objectives developed on the recommendations of GAPPD and international best practices.”*

Further, a Preventive Pediatrician and a Member of TWG/CSG said, *“Maintaining a consistent supply line of commodities was crucial for the success of this project. Unless updated commodities for P&D were not made readily available by the government... the project would not achieve its desired objectives”*.

Regarding procurements of standard medical equipment, UNICEF relied upon the off-shore companies, which were distributed in the public sector of the intervention districts of Punjab through Punjab Health Facilities Management Company (PHFMC). According to a key informant of IRMNCH Punjab,

“...ARI Timers were distributed to LHWs; however, inconsistency has been observed with regards to their use... For diarrhea management, Zn DT was also provided to LHWs by the Programme through own resources but supply of Lo-ORS could not remain consistent”

A provincial stakeholder from Sindh also informed, *“Our facilities have oxygen, nebulizers, ARI timers and pulse oximeters Oxygen cylinders are now also available in 300 BHU plus facilities”*. Another provincial official stated, *“The government procured a lot of Zinc and Amoxicillin syrups so our healthcare facilities are loaded with syrups, however, we purchase DTs whenever new stock is required”*.

Contrary to the public sector, there was improved availability of dispersible formulations in the market for private sector, however, the prescription trend has been modified only partially in the

intervention districts. Even in some of better-developed non-intervention districts, such as Okara, Kasur and Lahore, availability and use of commodities had improved, because of increased demand and sensitization by leading pediatricians and GPs. Co-packaging of Lo-ORS and Zn DT however, could not be fully implemented across the board.

In the surveyed health facilities, information was collected during the quantitative survey about the availability of essential commodities (Table 8), which revealed that for management of U5 Pneumonia, Amoxicillin was available at most of the surveyed facilities in the form of syrup or DT (89.6%). In Punjab, 100.0% of the facilities had some form of pediatric formulation of Amoxicillin whereas Amox DT was available at only 16.7% surveyed facilities. Procurement of Amox DT by PPHI Sindh and its distribution to nearly all of the BHUs of Sindh was the reason for this stark variation among two provinces. Punjab, although convinced and initiated the process, could not complete procurement as minimum number of bidding pharmaceutical manufacturers to fulfil the codal formalities was not there. Therefore, in Punjab, Syrups were procured and were available at 100.0% of the surveyed facilities. Nearly, three-fourth of the surveyed facilities had commodities and equipment available to provide oxygen therapy to U5 Pneumonia cases and there was little difference by provinces and types of health facilities. Pulse Oximeters were available at 79.2% of BHUs and 58.3% of RHCs. ARI Timers, an important tool for diagnosing U5 Pneumonia, were available at 85.4% of surveyed facilities.

Assessment of commodities required for management of U5 Diarrhea revealed better picture as compared to Pneumonia. Overall, at the surveyed facilities of Punjab and Sindh, Zinc was available at 95.8% in any pediatric formulation (Syrup or DT). Similar to Amox DT, Punjab could not procure Zn DT either and alternatively, Zinc Syrup was procured and was available at the all the surveyed health facilities. ORS (Either regular or Low Osmolar) was available at 91.7% of surveyed facilities. Regular ORS was available at 83.3% facilities of Punjab and Sindh whereas Lo-ORS was available at only 33.3% facilities of Punjab and 55.6% of Sindh. IV Fluids (Normal Saline, Dextrose Saline or Ringer’s Lactate) was available at 75.0% of the surveyed facilities and there was little difference between availability at BHUs (79.2%) and RHCs (70.8%). However, among provinces, 91.7% facilities of Punjab and 69.4% facilities of Sindh had IV fluids available to manage critical cases of U5 Diarrhea.

Table 8: Status of Pneumonia and Diarrhea Commodities

Percentage of surveyed health facilities having updated commodities for management of U5 Pneumonia and Diarrhea, by province and type of facility

Commodities	Overall	By Province		By Type of Facility		
		Punjab	Sindh	BHU	RHC	
Management of U5 Pneumonia						
Amoxicillin Syrup	52.1%	100.0%	36.0%	46.0%	58.0%	
Amox DT	62.5%	16.7%	77.8%	75.0%	50.0%	

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Amoxicillin Injection	56.3%	75.0%	50.0%	50.0%	62.5%
Amoxicillin (Any Formulation)	89.6%	100.0%	86.0%	96.0%	83.0%
Oxygen Therapy	73.0%	75.0%	72.0%	75.0%	71.0%
Pulse Oximeter	68.8%	75.0%	66.7%	79.2%	58.3%
ARI Timer	85.4%	100.0%	80.6%	79.2%	91.7%
<hr/>					
Management of U5 Diarrhea					
Zinc Syrup	72.9%	100.0%	63.9%	75.0%	70.8%
Zn DT	64.6%	16.7%	80.6%	62.5%	66.7%
Zinc (Any Formulation)	95.8%	100.0%	94.4%	95.8%	95.8%
Low Osmolarity ORS	50.0%	33.3%	55.6%	58.3%	41.7%
Regular ORS	83.3%	83.3%	83.3%	79.2%	87.5%
ORS (Any Strength)	91.7%	100.0%	88.9%	95.8%	87.5%
IV Fluids	75.0%	91.7%	69.4%	79.2%	70.8%
Total Health Facilities	48	12	36	24	24

- Local manufacturing of updated commodities

Project aimed at improving local production of updated P&D commodities to ensure availability in public sector healthcare facilities and in open market for private practitioners. A feasibility analysis was conducted at the inception of the project to assess manufacturing potential for updated P&D commodities. Based on findings of that analysis, local manufacturing of P&D commodities was encouraged through advocacy with pharmaceutical manufacturers and DRAP, which ultimately led to licensing of fifteen units to produce these commodities. Further, the products were included in the revised Essential Medicine Lists (EML) and Procurement Lists.

Furthermore, at the start of project during the landscape and feasibility analysis, relevancy of factors identified to influence supply and demand of updated commodities were also assessed. Considering the supply side, the *production capacity* of five large pharmaceutical units was studied in detail. Manufacturing capacity for Amox DT and Zn DT by most units was found to be over one million tablets per day; however, the available production data revealed that this capacity largely remained underutilized. For instance, a company having production capacity of 1.4 million tab of Zn DT per day manufactured only 0.21 percent of its potential during the initial years and supplied merely 4.2 million tablets to the public sector in last 18 months (Jul 2020 to Jan 2022). Most common factor quoted to influence manufacturing decision was '*profitability*', nevertheless as a result of effective advocacy, pharma industry unanimously agreed to keep their profit margin minimum within an affordable range for everyone. A leading pharmaceutical company however stopped manufacturing P&D commodities, as it found prices set by DRAP exceeded manufacturing cost. Its representative remarked; '*Government must set prices of commodities rationally and make necessary adjustments to keep production viable for the industry*'.

Factors that influenced demand side were identified, which included; affordability, availability, access, bulk purchase by the government, presence of a substitute (syrup versus DT), and awareness or lack thereof of prescriber or client. Affordability was recognized as by far the most crucial factor influencing demand. Current market prices of P&D commodities were compared with prices in 2016. It was revealed that the retail prices remained almost un-altered over the past 5 years for Amox DT 250 mg (PKR 5.5 per tablet) and Zinc DT (PKR 5 on average). However, price of Lo-ORS showed an increase of up to 30% (from average PKR 7 to PKR 10) during the same period. Sindh completed bidding processes soon after revision of EML and supplies are almost streamlined for most of the FLCF (BHUs, RHCs), run by Government or partner organization under PPP. However, due to challenges encountered at pre-qualification stage, supplies to the facilities remained limited in Punjab. To improve the demand and hence production, emphasis was made by pharma representatives on the need for continued advocacy. One key informant quoted; *'To sustain the impact of this intervention, continued advocacy to modify prescribing behavior of service providers and beneficiaries' preference is very much needed'*.

- Revision of IMNCI guidelines and trainings

Another major contribution of P&D Project is evident from revision of pre-service and community modules of IMNCI guidelines. The IMNCI guidelines for healthcare providers were revisited and training modules updated in consultation with provincial IMNCI TWG. Similarly, in the light of IMNCI guidelines curriculum and training manual for building the capacity of community workers (LHWs) was also revised in the intervention districts. UNICEF' project supported community and pre-service modules for the community workers, as detailed below:

- Project supported for the development of community module for LHWs, with an enhanced focus on P&D management. However, there is a need for translation into local languages.
- Project also assisted in the preparation of pre-service module for Pakistan Medical Commission (PMC) and Pakistan Nursing Council (PNC). P&D commodities were included in the undergrad curriculum; however, an approval is pending due to limited advocacy by project during Covid-19.

- Availability of IMNCI Guidelines & IEC Material at Health Facilities

Provision of IMNCI guidelines in printed form was assessed at the surveyed facilities and nearly three-fourth (72.9%) of surveyed facilities had these guidelines available in the form of booklets or wall charts. In Punjab, 83.3% facilities had printed IMNCI guidelines as compared to 69.4% of Sindh. Among health facilities, 79.2% of BHUs and 66.7% of RHCs had the guidelines available. Communication and IEC material to raise awareness of the community on prevention and danger signs of Pneumonia and Diarrhea in children was available at 75.0% of the health facilities with no difference between BHUs and RHCs.

Table 9: Availability of IMNCI Guidelines

Percentage of surveyed health facilities having treatment guidelines in the form of booklets or wall charts and IEC material available for U5 Pneumonia and Diarrhea, by province and type of facility

Printed Material	Overall	By Province		By Type of Facility	
		Punjab	Sindh	BHU	RHC
IMNCI Guidelines (Booklets)	70.8%	83.3%	66.7%	75.0%	66.7%
IMNCI Guidelines (Wall Charts)	66.7%	66.7%	66.7%	75.0%	58.3%
IMNCI Guidelines (Either Form)	72.9%	83.3%	69.4%	79.2%	66.7%
Communication/IEC Material	75.0%	66.7%	77.8%	75.0%	75.0%
Total Health Facilities	48	12	36	24	24

- Capacity building of community and facility (public and private) staff

UNICEF project also provided support in capacity-building activities of the facility staff (public and private) and community. During 2017-18, provincial governments provided trainings to both public and private sectors healthcare providers, under the supervision of TWG/CSG and support of RMNCH, PPA and PMA for attaining maximum coverage. UNICEF coordinated all trainings and provided logistic support. Initially, experienced professionals, mostly belonging to tertiary care institutions in the public sector were engaged in training of the master trainers. DHOs/CEOs nominated recipients for TOTs from each district. Further, in trickle-down district level trainings, these district master trainers trained facility in charges, who then passed this on to Paramedics and LHSs and LHWs. As one of the facility in-charges stated, *“Training was very important and useful... during house job, majority of the doctors have no exposure to pediatrics or children’s diseases... which was provided during training”*.

An estimated 50 master trainers were trained across the Pakistan. Regarding provincial statistics of trained personnel, it was seen that 29 Master Trainers were trained from 5 districts of Punjab, including District Coordinators RMNCH, Pediatricians, Gynecologist, SMOs, MOs, WMOs, MEOs, and APMOs etc. under Primary and Secondary Healthcare Department and IRMNCH&N Programme, Government of Punjab. Additionally, 3 more TOTs were conducted by Preventive Pediatrics Department of a Tertiary Care Department in Lahore, where 60 service providers received TOT. These master trainers subsequently trained 7,639 care providers in intervention districts, in 20-25 participants' batches. Two-day trainings were conducted in the health facilities which covered LHW-MIS, DHIS, and updated Management of childhood P&D. Further in the private sector of Punjab, PMA supported Punjab government in selecting private practitioners (GPs) as Master Trainers, in consultation with UNICEF. It was claimed that PMA had organized trainings in the private sector in 15-16 districts, including non-intervention districts, e.g., Sargodha Khushab, Kasur, and Attock. Trainings covered updated management of childhood P&D, revised IMNCI guidelines focused at P&D management, and referrals. Diagnostic and

therapeutic equipment and samples of updated commodities were used for demonstration during the training sessions, along with distribution of IEC print material (both in English and Urdu) including booklets among the participants. UNICEF project team monitored the training, though no structured assessment was done to determine the quality of training.

In Sindh, DOH organized trainings of the Master Trainers on IMNCI modules with technical support of UNICEF. The focus was to ensure implementation as per GAPPD/WHO recommendations and use of updated P&D commodities in clinical practice, preferably in dedicated U5 clinics. These trainings were supervised by CSG as well as RMNCH for quality assurance. These TOTs were organized for 23 districts, where 46 master trainers were trained. These TOTs were held in 2 -3 batches of TOTs in Dow Medical University, Karachi, followed by cascade trainings. A key informant of CSG quoted, *"The presence of the commodities is important... however for desired outcome of trainings, commodities availability and utilization must be ensured for effectiveness"*.

In addition to the above trainings/capacity-building activities, the project also facilitated in raising awareness among medics through seminars at Family Physician forum as well as CMEs at tehsil/district level. These seminars served as refreshers for those, who had already received trainings. A facility-level stakeholder endorsed the contribution of UNICEF and recommended, *"Such trainings should be an ongoing process to keep the service providers updated about new trends in disease management"*.

On a whole, HCPs were oriented on IMNCI case classification in the trainings and learnt to categorize, treat, report, and refer in a standardized manner. According to provincial informant, *"some refreshers were provided by the District Coordinators in 2020... and these trainings were not affected due to Covid-19, since these were conducted before it appeared"*. However, another key stakeholder commented on the quality of trainings and highlighted, *"It is commonly observed that the quality of training goes down as it is rolled out to 2nd and 3^d tier of care providers"*.

- Updating DHIS tools and roll-out of DHIS2, and strengthening of supply chain management through HLMIS

The project extended its support to the provincial governments to update DHIS, aligning it with updated IMNCI guidelines, roll out DHIS 2 and integrate it with different data systems including HLMIS. With the continuous efforts of UNICEF P&D project, provisions were added in the monthly report format (Medicine & Vaccine Reporting Form) for gender disaggregation for Zn DT and Amox DT, and Lo-ORS. DHIS 2 has been customized for meeting specific needs for Pakistan. The age and gender categories have been segregated further to provide more precise and useful data for the analysis. Furthermore, P&D has been sub-classified to capture the nature of disease presentation to aid provision of appropriate treatment and management, as well as disease outcome status. Before updating DHIS 2, a list of indicators was developed in consultation with all stakeholders.

UNICEF project was at the forefront in promoting and providing technical, financial and human resource support to the provincial governments for establishment and deployment of DHIS2

through provision of trainings and implementation of DHIS 2, and establishment of digital supply chain management system (HLMIS) to support a scientific forecasting, procurement and real time maintenance of record of MNCH commodities. Regarding UNICEF' support in rolling-out of DHIS2, provincial variation was observed. Results highlighted that DHIS2 was implemented in the intervention districts of Punjab, nonetheless, its implementation was in process in Sindh. In case of Punjab province, UNICEF provided support in piloting of DHIS-2 in 5 intervention districts to facilitate health managers for real-time decision-making. Further, it has been rolled out in up to 14 districts of the province of Punjab and now Punjab is serving as a resource center providing study tour support to other provinces. Efforts are continued to scale it up to the rest of the districts and to integrate it with the logistics management information system (HLMIS). One of the key respondents on a senior government position remarked, *"The existing health information system provided us retrospective view of the past month....there is a dire need for real-time data transfer so that we could take timely decisions for corrective measures"*.

In order to roll-out DHIS2, the Health Department imparted 1-Day DHIS2 trainings in the 5 intervention districts between Oct-Dec, 2020, followed by trainings in 14 additional districts of Punjab. Master trainers (including nominees from district health office and teaching hospital) were trained at the provincial MIS cell, with the technical and logistic support of UNICEF. The training of master trainers was followed by trainings at health facilities, where medics, paramedics, medical technicians, nurses and the I.T staff were trained. An informant shared, *"...Short refreshers were given by health managers during monitoring visits to facilities. Districts where trainings were completed, have begun reporting on DHIS2. HLMIS is expected to take 6 months to a year before it becomes fully functional"*.

During Covid-19 peak periods, there had been some delays in training and reporting. Since facilities were closed and there was no patient data, hence reporting was partly affected. Interestingly, during post-Covid-19, number of patients coming to facilities has reduced compared to pre-Covid-19, though staff has resumed work fully.

One of the provincial stakeholders highlighted,

"DHIS2 has been synced with the LHV app (reflecting data of RMNCH form) and will eventually be linked to several other Apps. The disease-wise data obtained will be displayed on a single DHIS2 dashboard, showing data of all the registered health facilities. Facilities now send their DHIS2 data digitally making the process efficient. With time as more and more programmes see the benefits of big data, integration and usage of the DHIS2 dashboard will become easier and common".

As far as the rolling-out of DHIS2 in Sindh was observed during ETE, it progressed gradually. The project provided support in updation of DHIS monthly report form to include P&D commodities along with sub-categorization of age and gender. DHIS2 was customized to meet local requirements since 2018 with addition of several indicators and the necessary equipment purchased with support of UNICEF. In the list of diseases, some diseases e.g., dengue, chikungunya etc. have been added. The efforts are now underway to start piloting DHIS2 and later rolling it out in all the districts. According to a key informant of the health department,

“refinement of DHIS was an important contribution of this project for diagnosis and management of Pneumonia and Diarrhea”.

With the support of UNICEF, trainings were provided to concerned staff on revised DHIS. In the public sector, 4-day Training of trainers (TOTs) on revised DHIS were provided at the provincial level to 3-4 nominees from each district (DHIS coordinators and data entry operators at district level and representatives of partner organizations operationalizing outsourced health facilities) followed by trickle-down trainings in the districts. In the facilities, trainings were provided to medics, paramedics and LHVs, while computer operators were trained separately. During trainings, demo was also provided for the use of updated P&D commodities. UNICEF project provided technical and logistic support, including printing of tools, and quality assurance. One of the provincial officials commented, *“Quality of data is being monitored every month by the district managers through LQAS... Trainings on HLMIS relating to MNCH have been piloted in some THQs and DHQs, and feedback received from the trainees”.*

Analysis found that Covid-19 did not affect trainings in Sindh province as well, as these were already completed before the Covid-19 emerged. A key informant from the DG Office stated on the significance, *“DHIS provide us a snapshot of performance of the facility and disease trend for planning”.*

One of the provincial stakeholders also remarked,

“The department is using DHIS data in decision making for improving the quality of the services. As for HLMIS, the software is being developed to maintain digital records of stocks... however, the department is not getting sufficient data through HLMIS and it is not linked with DHIS as yet. The department looks forward to UNICEF for further support in the implementation of DHIS2 and its integration of HLMIS”.

Additionally, UNICEF also arranged a study tour for the DHIS Team of Sindh to 2 districts of Punjab, Jhelum and Okara, to study DHIS2 in Punjab and boost its implementation in Sindh. A KII with Provincial MIS Stakeholder revealed that the use of the information gathered from DHIS2 is gradually increasing, *“People have also started to realize how important this data is... (they) have begun to use it for decision making and more programmes see the benefits of big data, integration and usage of the DHIS2 dashboard.”*

EQ: To what extent the implementation of the project approaches worked as intended, particularly after the baseline in 2016 and Covid-19 pandemic emergency crisis in country after early 2020 onwards and subsequent adjustments?

Finding: Achievement of project objectives was possible through advocacy and opinion building at all levels. However, there was limited focus on raising community awareness.

- Major factors influencing project’s achievement included persistent advocacy efforts, institutionalization through existing government structures and engagement of professional associations and pharma industry in project implementation.
- Mass media campaign was launched through newspaper supplements and broadcasting messages on Radio and TV only in Punjab province with involvement of prominent figures.

High level advocacy was done with policy and decision makers at all levels with inclusion of both public and private sectors. Secretaries and DGs of health department at both federal and provincial level, relevant stakeholders like IRMNCH in Punjab, MNCH and Child Survival programme in Sindh, Development partners, professional bodies (PPA and PMA) and representatives of pharmaceutical industry were all engaged during project implementation. A Project Steering Committee, later merged in National RMNCAH&N Technical Working Group was established at the federal level. Child Survival Groups were notified in both Sindh and Punjab provinces, whereas in Sindh, this CSG was re-notified as MNCH Technical Working Group.

- Advocacy forums

The role of the advocacy forums was appreciated by all stakeholders as platforms for initiating policy dialogue on discussing innovative management approaches of childhood illnesses and decision making on child survival related interventions. Although the technical working of this project had been completed by 2021, UNICEF still ensured that regular quarterly meetings of TWG and CSG were held (even if held remotely), despite challenges of having face-to-face meetings during Covid-19. It was seen that since RMNCAH&N TWG was actually a government steered forum at federal level, it proved to be *'strong force to get this project implemented'*, as described by a provincial stakeholder in Punjab. These efforts supported the Ministry in implementation of UHC packages in both the provinces. Currently seven benefit packages are being steered by the federal ministry. Ministry also steered effort in the revision of IMNCI guidelines, development of abridged IMNCI course and updating P&D commodities. Working group using RMNCAH platform was notified to review different modules of IMNCI for care providers and community workers and LHW curricula, which lead to capacity building/orientation of care providers on revised modules.

Similarly, Working Groups on Child Survival and IMNCI TWG formed under this project at provincial level, resulted into improved stakeholder engagement. There have been greater inter and intra provincial (MNCHP, LHWP, PPA) communication and coordination. Linkages were enhanced with media and child health group improving stakeholders' sensitization and in reducing knowledge and awareness gaps. PPA, PMA and pharma industry representatives were significantly mobilized on child survival issues focusing P&D through CSGs. Other implementing partners like AKU also implemented their interventions to supplement efforts for child survival.

A CSG member from Punjab while highlighting the achievement of CSG opined,

"Our technical CSG has been very active and engaging... we have had many sessions within it. A key achievement of CSG has been the updation of procurement lists of departments to include dispersible tablets and have it included in the standard list of drugs i.e., EML".

Like in MTE, both federal and provincial level participants were still unanimous that the forums like TWG and Child Survival Group should be institutionalized for a continued effort to move the agenda forward beyond project life.

- Communication, orientation and awareness raising

Under this project UNICEF had been perusing an effective communication strategy to increase public awareness, however the focus has been very limited on awareness as the demand generation component was with other IP (AKU).

"The project focused on many things (for advocacy) but its main focus was on opinion building. The public awareness was not a major component of this project..." KII with TWG Representative

Social media and print media were actively engaged especially in commemorating "World pneumonia days" throughout the tenure of the project. In 2020, a multimedia approach was adapted to complement print materials. Considering the Covid-19 situation, UNICEF involved social media at a much wider level by floating short quizzes, GIFs with messaging on childhood pneumonia and Covid-19 circulating social media. A pneumonia awareness video was also launched whereas a live radio show was organized through local radio channels (including FM101, FM93 and MW) for the general public across the country with a reach of 1.5 million audience.

Flyers and brochures were printed which were reviewed and finalized by the CSG and provided to health workers and facility staff and also distributed during events organized on World Pneumonia Day or on Diarrhea Day. These campaigns focused on mothers to help them detect early symptoms of disease, avoid self-medication and seek treatment from professionals than quacks, besides emphasizing the importance of personal hygiene, nutrition and child vaccination. Mass communication with general population using electronic or social media was less commonly employed. Modalities included newspapers supplements, TV and radio broadcasting and WhatsApp messaging. UNICEF's social networks and channels were also used. A mass media campaign was launched in which ministers of health, prominent figures of academia, as the President of PPA, and senior professional including professors were invited. Professionals and community notables were interviewed which were later telecast on the TV.

Project provided orientation of health care providers on updated P&D management through seminars and conducted awareness sessions with the communities during routine sessions conducted by LHWs on disease prevention from 2016-19. IMNCI training curriculum for LHWs included a "community module" on disease prevention (explaining value of personal hygiene and safe drinking water etc.) and signs/symptoms of P&D for syndromic management. UNICEF supported health departments in celebrating pneumonia and diarrhea days.

The project predominantly focused at system strengthening and skill enhancement compared to demand generation. Aga Khan University provided support in certain community awareness activities in Sindh and Punjab; in particular in Rahim Yar Khan, Muzaffargarh and Dera Ghazi Khan. The target audiences of these activities were GPs and Community Health Workers (e.g., LHWs). CMWs also conducted health awareness sessions with mothers/care givers of U5 children on disease prevention. Seminars were conducted to raise awareness of GPs, who cover around 70 percent of population. In these sessions, the importance of practicing upon updated IMNCI guidelines was highlighted in bringing down P&D morbidity and mortality, particularly in U5 children. It was a common observation by key informants that GPs were influenced the most by

the prescription trend of the senior consultants working in tertiary hospitals. According to a representative of a leading pharma industry;

'We have observed reluctance by many of senior doctors in prescribing newer P&D commodities in their private practice, even including those who have been involved in advocacy, due to lack of acceptability amongst beneficiaries thus pointing towards the need for continuous advocacy effort'.

The pharma industry representatives were also involved by UNICEF in the CSG meetings and in advocacy seminars arranged for the medics for raising awareness on updated commodities at the central/provincial as well as in the selected district level. Most such activities were organized during 2016-2019 which resulted in deputing of a dedicated team of medical reps for promoting dispersible commodities all over Pakistan. However, it was observed that overall demand generation through the private sector remained far short of expectation, thus requiring continued effort.

- Engagement of professional associations

Advocacy seminars were conducted at provincial as well as district level. In Punjab, these were conducted in the 5 districts in collaboration with Pakistan Medical Association (PMA) and Pakistan Pediatric Association (PPA); representative bodies of the professionals. To decrease the incidence of childhood illnesses including P&D, it was emphasized that it was equally important to utilize the services of all the concerned departments/organizations, including education sector (public & private), and professional association including PPA and PMA.

PPA supported the government in creating awareness among the pediatricians' community and played a vibrant role in updating IMNCH guidelines, in the revival of abridged course and in the curriculum redesigning. Moreover, PPA developed a mechanism for awareness, training and advocacy of Pediatricians in general practice and also of General Practitioners (GPs), with support of Pakistan Academy of Family Physician (PAFP). PMA supported the government in enhancing awareness among the general practitioners (GPs). It also engaged influential people in the villages (*numberdars*) for spreading awareness and changing the mindset of the community which helped shunning taboos of society. As a result of these efforts, remarked a key stakeholder, *'We were able to create awareness to a level that it even influenced quacks to use the information'.*

It can be clearly claimed that persistent advocacy efforts and focus on the project on opinion building and institutionalization through existing government structures have been critical in achievement of project objectives. A senior implementing partner representative highlighted the achievement of this project,

"This project has facilitated referral acceptance of LHWs and of dispersible commodities in the community...during the last 5 years utilization of services has been enhanced and incidence of pneumonia and diarrhea has dropped".

The close coordination with the government and provision of an enabling policy environment through this project has resulted in UNICEF being able to achieve the following:

- Updating of IMNCI policy and its translation in line with GAPPD;
- Use of new approaches have become part and parcel of service delivery protocols;
- Strengthening of management information system through inclusion of P&D indicators in DHIS and roll-out of DHIS2;
- Major shift has been made in the treatment approaches and updated commodities became part of EML;
- Use of Zinc in diarrhea has been promoted and Amoxicillin has replaced 2nd and 3rd generation antibiotics with increased use of DT formulations. Similarly, Lo-ORS use has also been promoted.

Roll-out of DHIS2 in Sindh has remained a challenge for which no-cost extensions have been availed by UNICEF. Further, co-packaging of Lo-ORS and Zn DT was one of the non-achieved interventions, which could not be fully implemented across the board.

Finding: Covid-19 was a major competing priority in health sector, particularly for advocacy and capacity building interventions focused on childhood Pneumonia and Diarrhea.

- Advocacy forums heavily relied on face-to-face interactions, which were deterred during pandemic times.
- Overall health system was diverted to Covid-19 but it did not disrupt service delivery in rural communities where project was implemented.
- There was low incidence of Pneumonia and Diarrhea in children due to lockdowns/ restrictions (social distancing, online schooling) and improved hygiene.
- Project achieved majority of its milestones till the end of 2019.

Covid-19 caused a shift in priorities of the federal and provincial governments, from MNCH services to the Covid-19. Essential health services (clinical/preventive) and certain project related activities were delayed but on the whole project's operational activities were not much affected. This mainly was due to the fact that most of the project's milestones and key activities (e.g., trainings) were accomplished prior to the emergence of Covid-19. Similarly, LHWs priorities were also tilted and their access in homes was disrupted during pandemic. However, their overall service delivery was least affected particularly in rural communities and they continued visiting door to door. Those remaining were eventually covered during the period of project extension.

The routine service delivery was disrupted (up to 30-40 %) during active phase of Covid-19 and some delay of project activities was evident during complete lock-downs and social distancing, as reflected in the DHIS data. In some of the orientation sessions held under the project for the care providers, instructions on Covid-19 prevention were added to the routine teaching content. A lower incidence of Pneumonia and Diarrhea was reported in children during Covid-19 peak periods attributed to lockdowns/restrictions (limited access, social distancing, online schooling) and improved hygiene, however the magnitude of P&D on child survival in the country was best described by a federal stakeholder that *'If mortality data of U5 is analyzed, we are likely to find that a greater number of children have actually died due to P&D in Pakistan than Covid-19'*.

Where Covid-19 was an impediment in smooth implementation, it also brought opportunities like use of innovative means of communication and remote monitoring. The project also availed them to ensure cadence of TWGs and CSGs on child survival in Sindh and Punjab where few TWG/CSG meetings and orientation sessions were conducted on the virtual platform and a telemedicine programme was initiated for the community on toll-free number and through video consultation apps. This cell, run by registrars and senior PGs, already engaged through this project, covered many specialties, including pediatrics and rendered free advice. Through use of technology, majority of the patients with childhood illnesses, including P&D, were given necessary advice.

A KII with Implementing Partner Representative expressed, "While on one side Covid-19 posed numerous challenges, it also provided opportunities for harnessing potential of IT and digital platforms, particularly for capacity building." The project had to go into no-cost extension only to cater to the need for rolling-out DHIS2 in Sindh province, which was delayed due to the pandemic.

EQ: How effectively various Federal and Provincial departments of health and programmes coordinated among each other?

Finding: Various coordination mechanism were established to engage government stakeholders, development partners and experts.

- There was greater inter and intra provincial communication and coordination through federal level steering committee and TWG/CSG at provincial level.
- Pakistan Medical Association (PMA) and Pakistan Pediatric Association (PPA) were significantly mobilized on child survival issues.
- Regular coordination mechanisms were hampered in post-Covid-19 scenario due to limited face to face interactions.
- These coordination mechanisms helped leveraging additional resources for implementation of trainings and scale up to non-intervention districts.

Effective coordination mechanism between federal and provincial levels was established for high-level advocacy and progress monitoring purposes. At the federal level, a government-led project steering committee was established at the initial stage, however this forum was merged in National Steering Committee on RMNCAH&N due to similar ambit, scope and participating members. Considering the notion that this was under the stewardship of the Ministry with participation from all relevant stakeholders; ownership, will and coordination required for advocating policy change and translation under this project was logically attained.

Child Survival Groups were notified at the provincial level in both Punjab and Sindh, however the CSG of Sindh was incorporated in MNCH Technical Working Group during the implementation of the project. In Punjab, Policy & Strategic Planning Unit (PSPU) of Department of Health, notified the Technical Working Group on child survival. The CSG/TWG was chaired by DGHS with representation from the department of health, IRMNCH&N Programme, professional associations including PPA, PMA, pediatricians of tertiary care hospitals, pharma industry representatives as well as development partners. In all, 27 multi-sectoral representatives were

involved. Similarly in Sindh, MNCH TWG also had varied participation from department of health, MNCH programme, Child Survival Programme, LHW Programme, pediatricians, implementing partners working in the province including AKU, PPHI and other development partners. The engagement of all relevant stakeholders through these oversight and coordination forums was one of the hallmarks of the project. These fora provided opportunities for regular meeting, coordination and progress monitoring against the planned and implemented child survival interventions. The groups met periodically and were utilized as platforms for sharing experiences, lessons learnt, reviewing progress and making coordinated efforts to ensure provision of updated resources under the P&D project. UNICEF has been providing the necessary support in implementation of the decisions and recommendations of these technical groups in achieving set project outcomes.

According to CSG/TWG member in Punjab *"There were regular meetings for the TWG with a proper agenda, where progress report was also presented to ensure project oversight"*. One of the federal stakeholders while highlighting the efficacy of Steering Committee of RMNCAH&N expressed, *"It was a strong force to get this project implemented"*.

The regularity of these forums at both federal and provincial level had been ensured by UNICEF during the project period, however it was challenging to ensure cadence of TWGs on child survival in Sindh and Punjab during Covid-19 pandemic. A KII with Provincial Stakeholders revealed, *"Chain of our quarterly meetings of TWG was broken due to Covid-19"*, however some TWG meetings were undertaken virtually with coordination of UNICEF project team, leading to a dip in advocacy efforts during pandemic. Although P&D Project has concluded, TWG/CSG still exist as forums for child survival. It can be clearly ensued that active participation and regularity of this coordination mechanism led to greater inter-provincial and intra provincial communication, ownership and coordination. Some of the examples of effective coordination leading to attainment of project objectives include, engagement of professional associations (PMA, PPA) in these forums resulted in leveraging additional resources for implementation of trainings, pharmaceutical representatives' sensitization led to local manufacturing of updated P&D commodities, while steering committee at federal level contributed in scaling up of interventions and communicating lessons learnt to other provinces.

EQ: Whether the health care providers and community health workers have the required knowledge and skills to appropriately utilize the supplies as per WHO/UNICEF recommended standards?

Finding: A significantly high percentage of the surveyed health facilities in both Punjab and Sindh province had at least one care provider who had received IMNCI orientation with little variation among surveyed BHUs and RHCs.

Building staff capacities at health facilities to manage U5 Pneumonia and Diarrhea at health facilities was one of the key activities in the project Theory of Change. After updating and abridging IMNCI modules, the project supported the implementation of IMNCI trainings or targeted orientation on its Pneumonia and Diarrhea components. Resultantly, 95.8% of the surveyed health facilities had at least one care provider had received IMNCI orientation or training, with 100.0% in Punjab and 94.4% in Sindh with little variation among surveyed BHUs

and RHCs Medical Officers (MOs) and 54.2% of Women Medical Officers had received IMNCI training at 68.8% and 54.2% of health facilities, respectively. In Punjab, only 33.3% of MOs had IMNCI training as compared to 80.6% of Sindh whereas all health facilities reported training of LHVs in Punjab. Another important aspect of the assessment was IMNCI trainings of LHWs linked with the surveyed facilities and overall, 64.6% of facilities reported orientation of LHWs on the use of updated commodities in management of childhood Pneumonia and Diarrhea, with 41.7% in Punjab and 72.2% in Sindh.

Table 10: Status of IMNCI Orientation and Training

Percentage of surveyed health facilities having staff trained or oriented on IMNCI guidelines, by province and type of health facility according to staff positions

Staff Positions	Overall	By Province		By Type of Facility	
		Punjab	Sindh	BHU	RHC
Doctor (WMO)	54.2%	16.7%	66.7%	45.8%	62.5%
Doctor (MO)	68.8%	33.3%	80.6%	70.8%	66.7%
LHV	72.9%	100.0%	63.9%	58.3%	87.5%
Linked LHWs	64.6%	41.7%	72.2%	54.2%	75.0%
Total Health Facilities	48	12	36	24	24

EQ: Whether monitoring and reporting mechanisms exist and were effectively implemented for effective tracking of desired results and improvement in decision making and system?

Finding: The project was a TOC-driven project, governed through an effective tracking mechanism with continuous in-built approach for course correction.

Soon after the initiation of the project, an ‘Evaluability Study’ and ‘Landscape Analysis’ was conducted with an aim to provide insight on barriers and facilitators to policy translation and commodity security in the public and private sectors at national and provincial levels (Sindh and Punjab). This facilitated in conceptualizing a prospective for accountability framework. Based on the findings and recommendations of landscape, a joint accountability framework was prepared that identified the interventions with the allocation of responsibility. This framework assigned indicators to every intervention for measuring their progress, taking into consideration the factors that might facilitate or hinder the processes mapped out for the desired outcomes. These analyses also provided foundation for retrospective Theory of Change (TOC) as there was no TOC developed at the inception of the project. As per the given TOC, the project laid down the basis for achieving the four key outcomes pertaining to policy change, translation, implementation and knowledge management of the project.

In lieu of the TOC, during the mid-duration of the project, UNICEF commissioned third party *midterm evaluation (MTE)* as part of the monitoring and evaluation activities to ascertain that the direction and progress made were in the right direction in meeting its ultimate goals. All critical

elements of monitoring and evaluation were addressed to understand and document the extent to which this project was successful in achieving its intended results, the progress towards specified project objectives and whether it was aiding the beneficiaries, and whether the stakeholders were productively involved in the policy change, policy translation, and policy implementation and knowledge management. UNICEF project team also utilized the evidences in reviewing the potential for scalability/replication of the project in other geographical areas in Pakistan and other settings.

UNICEF project team benefitted from the MTE to carve out the future course of action and course correction to achieve the goals of the project. Consequently, Theory of Change (TOC), prepared at the inception of the project and provided in the TORs was revisited and updated based on the findings of the midterm evaluation to improve the pathways of diagnosis and treatment of Pneumonia and Diarrhea in U5 children over the project period. Engagement assumptions along with target populations were identified to chalk out change pathways (activities), ultimately leading to activity impact towards the set goals.

This evaluation also facilitated UNICEF in documenting the overall progress and lessons learned from the project with recommendations that would be used in improving the project. These recommendations formed the basis for *Evaluation Management Response (EMR) Tracker*, focusing on how evaluation findings would affect implementation of the project and contribute to evidence-based decision making under the Global Evaluation Reports Oversight System (GEROS). All recommendations were well received by UNICEF project and the government counterparts. Actions were planned against each recommendation to make the Pneumonia and Diarrheal Project interventions institutionalized in the existing system for sustainability beyond the project life. Moreover, all recommendations of the mid-term evaluation were incorporated in AWP of 2020-21 to ensure the sustainability of the interventions carried out during project implementation.

Current end of project evaluation (ETE) was a continuity of these monitoring and evaluation activities to ascertain how successful the project was in achieving its desired results. This evaluation will document the overall progress and lessons learned from the project that will be used in improving health programming in accordance with the National Health Vision and UHC BP strategic focus, as well as support in laying out an exit strategy for future programming.

3.2.4. EFFICIENCY

Efficiency measures the outputs – both qualitative and quantitative -- in relation to the inputs. In this evaluation, alternative approaches to achieving the same outputs, and whether the most efficient processes were adopted was also assessed.

EQ: How well the resources, both human and financial, have been managed to ensure timely, cost-effective and efficient attainment of results? And to what extent planning, budgeting, monitoring and evaluation, supervision, coordination, logistics and financial management systems are functioning in support of the project objectives?

Finding: UNICEF effectively implemented the project with standardized management practices through a lean project team at federal and provincial levels.

The project had a minimalistic team at both federal and provincial levels, with one Project Manager and Officer in the center and two Health Specialists within the selected provinces of Sindh and Punjab.

- Planning and supervision

The project management team was thoroughly involved in the planning and supervision of the project at every stage and phase along with the Government of Pakistan under multi-year workplan. The provincial health specialists were extensively engaged in designing the activities proposed in the grant proposal for BMGF. After award, project team followed through continuous project planning and implementation during the last five years. Periodic progress reviews were undertaken and preparation of annual work plan was done to steer the project. Operationalization of these AWP's had been closely monitored to ensure achievement of project outcomes.

- Coordination and advocacy

Effective coordination mechanism was adopted to engage stakeholders in the project in form of government steered technical working groups. Considering this project was centered on policy change, translation, implementation and knowledge management, sustained advocacy and coordination with policy makers, planners, implementers and managers were the hallmark achievements of the project team. The team worked closely with government offices and management structures to help in institutionalizing the project's interventions in the existing system, and strengthening health sector at individual, organizational and systems level.

- Budgeting, logistics and financial management

The project utilized existing organizational structures to support the functioning of the project, particularly in relation to budgeting and financial management systems. Logistics management, particularly with regards to supply of updated commodities at the start of the project was done through international procurement process already in place for UNICEF, however this was later on facilitated through public procurement and local manufacturing.

- Monitoring and evaluation

Stringent M&E approach was adopted for the project. Since this project was TOC-driven, specific assumptions for engagement were identified at inception through an evaluability study and landscape analysis, which steered the M&E activities over the duration of the project. A joint accountability framework was developed and followed, with clear cut delineation of roles and responsibilities amongst key stakeholders. Contracting out of third-party evaluations at both mid-term and end-term of the project indicated the commitment of UNICEF project team in ensuring transparency and accountability. Further, at project level, progress against the Evaluation Management Response (through EMR Tracker based on MTE recommendations) had been submitted periodically to document progress achieved in pursuit of project outcomes.

Overall, it can be stated that all management systems contributed effectively to support the project.

EQ: What are the implementation challenges from the perspective of both right holders and duty bearers especially for the under-five marginalized children of communities?

Finding: Certain implementation challenges were identified from the perspective of both right-holders and duty bearers especially for the under-five marginalized children of communities.

- Frequent posting and transfers of key government officials, hampering advocacy efforts
- Limited focus on beneficiaries' awareness
- Concerns regarding provision of Amoxicillin to LHWs in view of AMR
- Inadequate availability of DT in open market due to low demand
- Preference for regular ORS and syrups by healthcare providers
- Private practitioners' engagement during early years of the project

Learning from UNICEF P&D Project management journey, several *implementation challenges* were encountered over the course of project life to achieve outcomes of policy change, policy translation, policy implementation, and knowledge management. Considering the perspective of both right-holders and duty-bearers, especially for the under-five marginalized children of communities, the most prevailing challenges were found as follows:

- Frequent posting and transfer of key officials, high turnover rate of managerial staff, particularly due to change in political leadership, which affected advocacy efforts
- Availability of limited expertise for the development of trainings material as well as IEC material in-line with the global guidelines,
- Inadequate capacity for data management at district level
- Lack of infrastructure/ IT equipment for reporting on DHIS2
- Involvement of private sector for establishing and managing Public-Private Partnerships (PPP) as private practitioners were engaged during early years of the project
- Non-availability of equipment such as ARI Timer, pulse Oximeter and Oxygen concentrator at facilities for proper diagnosis and treatment
- Inadequate production of P&D commodities at the local level, resulting in higher imports for the products
- Engaging local pharmaceuticals (technically and financially) to manufacture P&D commodities (Amox DT, Zn DT, and Lo-ORS) and register products with Drug Regulatory Authority of Pakistan (DRAP)
- Inadequate availability of DT in open market due to low demand
- Changing prescribing behavior of service providers for Lo-ORS
- Preference of beneficiaries for syrups against DT
- Limited focus on beneficiaries' awareness for use of updated commodities for P&D management
- Concerns regarding provision of Amoxicillin to LHWs in view of AMR
- Shifting priorities from the provision of MNCH services to control and treat Covid-19 patients, after the pandemic

- Antimicrobial resistance against recommended antibiotics; e.g., Amoxicillin.
- Delay in implementation of DHIS2 in Sindh

Various opinions of stakeholders were also observed regarding project implementation challenges. In view of a key Informant interview from Punjab stated, *“Certain challenges faced are due to non-integration of vertical programmes, which is imperative to bring real impact”*. Another provincial official informed, *“Government has stopped procurement of antibiotics for LHWs to curb the rise of antimicrobial resistance... these are now only available in the facilities”*.

In addition to the above, lack of accountability from the part of government was also cited as one of the major challenges. As a key informant remarked, *“accountability was not very clear... This gap cannot be filled by anybody other than the government itself... A strong check and balance is required to be in place to ensure smooth implementation at facilities”*.

A senior Pediatrician working in a tertiary care institution commented about frequent reporting of antimicrobial resistance against broad spectrum, 2nd or 3rd generation antibiotics, *“in the wake of such a situation, it is extremely difficult to convince junior colleagues to prescribe Amoxicillin”*. In view of AMR, concerns regarding provision of Amoxicillin to LHWs were also reported, as evident from the statement of federal level stakeholder,

“Cases seen by LHWs are commonly of mild nature, because for more serious ailments child is referred to health facility. LHWs in Sindh are permitted to start antibiotic (Amox DT) straight away if pneumonia is suspected. This practice was discontinued in Punjab due to suspicion that this practice has enhanced the ratio of antibiotic resistance”.

Further, supply issues were recorded regarding procurement of commodities for LHWs, for instance in Punjab, it was done at the provincial level and distributed through respective facilities. This supply however was never consistent, partly due to budgetary constraints, as most part of it was consumed in salary disbursement. Stockouts were more commonly reported for Lo-ORS. UNICEF also contributed to replenishing the stock, nonetheless, the gap persisted due to delays in supplies. The same was also endorsed by LHWs from both provinces, as informed by a LHW, *“we don’t have medicines except ORS... and requested the health department to provide essential medicines (e.g., Zn DT. etc.)”*.

A federal level stakeholder also highlighted the aspect of local manufacturing of commodities,

“The government was not able to promote local manufacturing of P&D commodities to the required level... There are a few pharmaceuticals, currently manufacturing and marketing these products. Currently, the production level (far lower than the actual capacity), is insufficient to meet the requirements. However, availability is better in Sindh as compared to Punjab, showing inequitable distribution”.

Furthermore, the lack of institutionalization of intervention at tertiary care facilities was observed, challenging the prescribing behavior of healthcare providers and beneficiaries. It was seen that GPs tended to follow prescription trends of tertiary care facilities. As a key provincial-level informant remarked, *“Unless prescriptions issued from tertiary care facility is not aligned with*

IMNCI guidelines, it would be difficult to bring the desired change in prescription behavior of GPs and junior colleagues”.

Another provincial stakeholder also commented, “The biggest challenge was of the syrup being replaced by the DT... because the doctors were quite reluctant. There have not been many cases of antimicrobial resistance reported”. On the part of beneficiaries, the trend of getting treated by Hakeem, traditional healer or Quack is still prevalent in both rural and urban setting, as shared by an official, “The medical practitioners find it challenging to compete with Hakeems, traditional healers or Quacks, owing to illiteracy, poverty and unawareness”.

The implementation of DHIS2 was also observed as one of the major implementation challenges of the project, particularly in Sindh province. With support of the UNICEF project, DHIS2 is functioning properly in Punjab, however, it could not be fully implemented in Sindh. DHIS Coordinator mentioned, *“in some areas, there was a shortage of trained HR staff... doctors and nurses were entering the data which affected the treatment of the patient while quality of data suffered due to lack of training”*. Need for refresher on DHIS2 was suggested by the majority of the coordinators.

The discontinuity of the project activities during Covid-19 times was also highlighted by the district-level stakeholders. As remarked by a DHO,

“Our healthcare providers got engaged with Covid-19 emergency, so P&D activities were neglected. OPD in some districts was closed, while in other areas, a smaller number of patients availed OPD services due to Covid. Trainings and awareness campaigns were also affected”.

EQ: To what extent has the project leveraged additional resources to address identified gaps and scale up the best practices to other geographic areas through project technical expertise?

Finding: During the course of the project, UNICEF leveraged additional resources for addressing gaps including in commodities, skills building and scaling up of best practices to uncovered provinces/areas.

In order to address the gaps in commodities, P&D Project managed to leverage additional resources utilizing existing structures and mechanisms, including encouraging and advocating for *local manufacturing, public procurement and procurement through implementing partners like PPHI*. Continued proactive engagement with private pharma and distribution networks was done by sharing areas of opportunities and informing them about the benefits of treatment. Further, continual advocacy and orientation sessions were undertaken throughout the project tenure with provincial DOH and pharma associations in Sindh and Punjab, while at federal level, advocacy was done using the platform of National RMNCAH&N TWG where it was ensured that key stakeholders like DRAP, pharma association representatives as well as representatives of PNC and PMC were engaged as nominated members which opened up venues for public private partnerships and MOUs.

As a result of building district capacities on forecasting, procurement, distribution, maintenance and warehousing and continued advocacy since 2018 with the local manufacturers, procurement

for the whole province of Sindh is now being done from government resources, whereas Punjab with a few challenges is partially procuring commodities as per their needs since 2020. However, Covid-19 did not pose any challenge in supply of medicines and updated commodities at the surveyed facilities.

As a result of continued deliberation and advocacy throughout the project tenure at national level with key stakeholders and provincial level for inclusion of revised management guidelines, the project also specifically influenced resources for inclusion of *IMNCl guidelines in HCPs and CHWs* curriculum through engagement of M/o NHSRC and regulatory bodies i.e. Pakistan Nursing Council and Pakistan Medical Commission as well as parallel advocacy with Midwifery Associations, professional associations (PPA, PMA) and Healthcare Commissions. Advocacy and technical assistance to Ministry is ongoing to establish mechanism where IMNCl as an integrated approach has been planned to be rolled out through Government own resources, while the inclusion of IMNCl guidelines in the curriculum through high level advocacy consultative meetings with key stakeholders/institutions is being implemented through UNICEF's own regular funds as an ongoing support to Ministry as key intervention in *UHC-Benefit package*. Further, UNICEF from own resources is also technically supporting departments of health in development of endorsed ECD sensitive IMNCl modules for HCPs and CHWs provincial action plans.

Additionally, involvement of private health care providers in CSG/TWGs coordination platforms for revision of IMNCl guidelines was a key factor in ensuring private sector engagement. This engagement of professional associations including PMA, PPA and academia led to signing of Public Private Partnerships (PPP) MoUs in provinces of Sindh and Punjab, providing the project an opportunity to seek additional resources for conducting *training sessions for GPs and HCPs* for updated management.

The project throughout its five years of implementation emphasized on encouraging *scaling up the best practices and lessons learnt to uncovered provinces/areas*. Involvement of all four provincial focal points of DOH had been ensured through established coordination mechanisms i.e., National RMNCAH&N Steering Committee and meetings of IMNCl TWGs. Sharing of MTE findings regarding the usefulness of updated commodities with provincial/area Health Departments and stakeholders of Pakistan through similar platform had also been done on multiple occasions. Further, involvement of uncovered provinces for revision of IMNCl modules and future replication on interventions as IMNCl TWG members was undertaken. National endorsement of IMNCl guidelines was sought, after which it was printed and disseminated to all 4 provinces and 2 regions to support the same advocacy agenda.

As a continuous support to the federal ministry by UNICEF, a study tour for experience sharing was organized to Punjab in 2 pilot districts where DHIS2 was operational, for federal as well as all four provincial DHIS managers through UNICEF's own regular fund. Policy briefs, brochures, flyers, fact sheets already developed during the project had been disseminated through different forums to policy/ decision makers across the four provinces. Taking the health system strengthening approach in the project, province KPK has been already supported through project technical expertise for DHIS2 implementation, which will later on involve capacity building as well. It is also envisaged that legacy of UNICEF P&D Project will be translated in other UNICEF

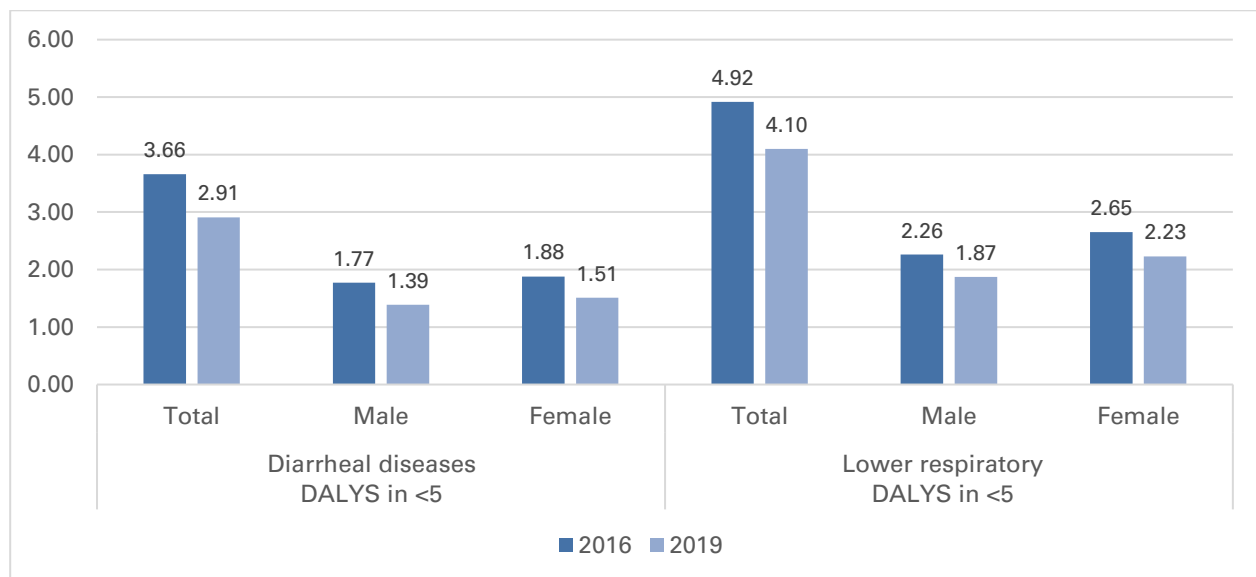
projects such as Scaling Pneumonia Response Innovations (SPRINT) project which aims to scale proven interventions e.g. expanding access to oxygen therapy and antibiotics for the treatment of pneumonia, similarly UNICEF supported projects for immunization (ROTA virus, pneumococcal vaccine), clean drinking water and total sanitation will and are benefitting from lessons learnt and built technical expertise of P&D project.

EQ: What is the value added in terms of number of lives saved and morbidity reduced?

Finding: DALYs decreased over project period indicate towards positive efforts of P&D Project in improving child survival.

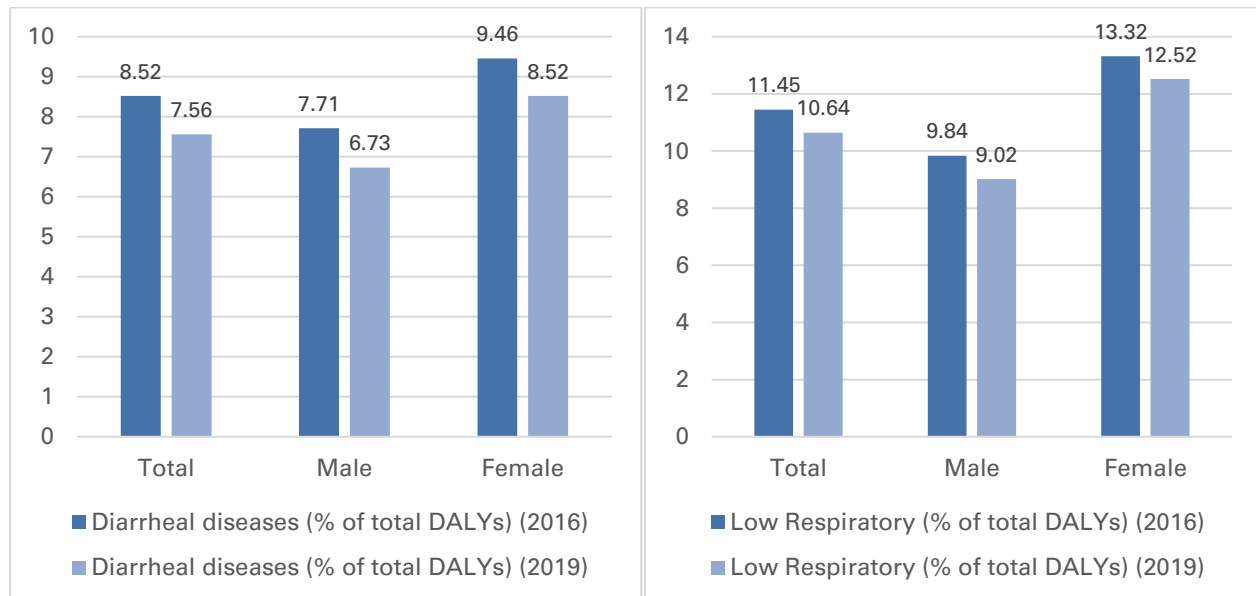
The analysis of Disability Adjusted Life Years lost (DALYs)* showed the burden of under 5 years childhood mortality and morbidity caused from Diarrhea and Pneumonia from 2016 to 2019. It was observed from the DALYs data that a higher number of children in Pakistan suffered from lower respiratory infection in comparison to diarrhea. However, overall, a downward trend was seen in DALYs of both lower respiratory infection and diarrhea amongst U5 children from 2016-2019, highlighting project efforts in creating a dent in childhood morbidity and mortality.

Figure 12: Number of U5 P&D DALYs Lost in Pakistan (in Millions) from 2016 to 2019



Further, the DALYs calculated for diarrheal and lower respiratory infections for U5 children highlighted gender disparity, where female children were found more vulnerable, as evident from the figure below:

Figure 13: Percentage of Total U5 P&D DALYs with Gender Gap and Reduction Over Time



*Source: GBD Compare: Institute for Health Metrics and Evaluation (IHME)

Keeping in mind that one DALY represents the loss of the equivalent of one year of full health, it is evident from above figures that a percentage reduction of nearly 1% (from 8.52% to 7.56% for diarrheal diseases and 11.45% to 10.64% for low respiratory infections) over a period of 3 years has reduced morbidity and mortality amongst millions of children less than 5 years of age in the country. This can be contributed towards the efforts of P&D Project during this time.

EQ: What actions including innovations are needed to improve the coverage to scale up to other geographic areas in country through evidence-based decision making?

Finding: Systems strengthening approach taken by the project has enabled the interventions to be well entrenched and suitable for scale-up and replication to other provinces/regions.

A critical project outcome was knowledge management involving replication and scale up of project activities in other geographical settings and in remaining uncovered provinces and regions of Pakistan. The system strengthening approach adopted by the project has paved way for institutionalizing the initiatives and provided evidence for replicability/scalability. The built technical expertise and experience of implementation in two of the large provinces of Pakistan will be a contributing factor in ensuring that the provincial level interventions will not take much effort for replication in the rest of the country. Cross-sharing of achievements, challenges and lessons learnt among uncovered regions and provinces of Pakistan through evidence-based policy advocacy and national level coordination mechanisms are envisaged as key steps for enhancement of geographic coverage of the interventions.

Updated federal and provincial EPHS reflect the recognition of updated commodities for managing U5 Pneumonia and Diarrhea. P&D Project supported inclusion and prioritization of cost-effective P&D interventions in UHC BP and EPHS, paving way for sustainability of child

survival activities – envisaged as one of the main innovations for scale up. Other prospects for replication and scale up in remaining areas/provinces include rolling-out of IMNCI agenda and DHIS2 in other provinces.

EQ: Whether the availability of P&D supplies was cost-effective and is doable (keeping in current Covid-19 context scenario as well)?

Finding: Use of updated commodities were found to be cost-effective and more affordable.

Pneumonia and Diarrhea are the leading cause of child mortality in Pakistan. These diseases can be prevented if the suffering child timely receives proper medication. To overcome the challenges, UNICEF with funding support from Bill & Melinda Gates foundation introduced new commodities for management of Pneumonia and Diarrhea. These commodities included dispersible tablets of Amoxicillin for the treatment of Pneumonia; Zn DT and sachets of Lo-ORS for diarrhea. It was found that the cost of treatment package of DT was lower than the cost of treatment through Syrup. The analysis showed that the cost of Amoxicillin syrup for treatment of Pneumonia was 0.37 to .50 dollars per child whereas the cost of newly introduced Amox DT was 0.26 to 0.31 dollars with 34% reduction in treatment cost between syrup and DT. Cost of Zinc Syrup for treatment of Diarrhea was found between 0.51 to 0.86 dollars per child, whereas the cost of newly introduced Zn DT was ranged at 0.17 to 0.29 dollars with 63% reduction in treatment cost. Cost of ORS sachet for treatment of Diarrhea was 0.27 to 0.36 dollars per child, while the cost of newly introduced Lo-ORS was 0.15 to 0.19 dollars with 38% reduction in treatment cost. Due to local manufacturing, advocated by the P&D project, these medicines are now readily accessible and as far as, prices are concerned, more affordable.

Table 11: Comparison of Medication Cost of Updated Commodities

Medicine	Medication Cost/ Child (in USD)		Decrease (Avg.)	
	Syrup	DT	Amount (in USD)	%
Amoxicillin	0.37 – 0.50	0.26 – 0.31	0.15	34%
Zinc	0.51 – 0.86	0.17 – 0.29	0.43	63%
	Regular	Lo-ORS	Amount (in USD)	%
ORS	0.27 – 0.30	0.15 – 0.19	0.11	38%

Equipment was also provided to the health care facilities for timely diagnosis of Pneumonia and Acute Respiratory Infections. This equipment included Pulse Oximeters, Oxygen Cylinders and ARI timers. Cost of equipping a health facility with above mentioned equipment was calculated to be between 110 to 160 dollars. As shown in the table 12, through a relatively nominal expenditure on the equipment, health facilities had been equipped to provide better treatment to children in need.

Table 12: Cost Per Health Facilities for Equipment to Manage U5 Pneumonia

Name of Equipment	Quantity Required Per HF	Unit Cost (in USD)	Total Cost (in USD)
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ARI Timer	1	2.9 - 4.0	2.9 - 4.0
Pulse Oximeter	1	15.7 - 18.9	15.7 - 18.9
Oxygen Cylinder 10 Liter	1	91.4 - 137.1	91.4 - 137.1
Total Cost for Equipping the Health Facility			110.0 - 160.0

The above analysis is indicative of the potential benefits of adopting these interventions, i.e., cost effectiveness leading to efficiency. The proposed treatment modalities have thus been shown to yield better results in terms of efficiency resulting in reduction of childhood morbidity and mortality. Furthermore, these interventions have a considerably lower price tag, making it more accessible especially for the vulnerable segments of society. This will in turn further enhance the positive impact on reducing childhood morbidity and mortality.

3.2.5. IMPACT

Impact entails the positive and negative changes produced by the project, directly or indirectly, intended or unintended. While assessing this for P&D Project, evaluation focused on what had happened as a result of the programme or project in terms of policy translation and implementation and how many people were targeted and benefited from project's interventions. All the policy outcomes of the P&D Project aimed towards ensuring appropriate treatment of children suffering from Pneumonia and Diarrhea, at both public and private facilities. Through quantitative data, results of the P&D Project are formulated against the following evaluation questions.

EQ: To what extent has the project achieved its goals in enhancing the health outcomes especially of U5 children in the catchment communities in Sindh and Punjab target districts?

Finding: High caseload of U5 Pneumonia and Diarrhea have been managed with effective therapeutic approaches through improved prescribing behaviors.

- Project served 71.3 million population of entire Sindh and 5 districts of Punjab.
- In contrast to common belief that Diarrhea is a disease of summers, the caseload of Diarrhea was higher than Pneumonia even in winters.
- Antibiotics prescription to manage U5 Pneumonia and prescription of Zinc and ORS for U5 Diarrhea have shown marked improvement over project life.

Project covered 31.7% of entire population of Pakistan, which included all 29 districts of Sindh and 5 districts of Punjab, making a total of 71.3 million population. At the surveyed health facilities, last month's DHIS reports were reviewed to obtain the information about caseload of U5 Pneumonia and Diarrhea at the health facility (Table 13). Mean caseload of U5 Pneumonia was 72.8 (SD: 125.9) with 45.9 in BHUs and 99.6 in RHCs. For U5 Diarrhea, mean caseload was 94.8 (SD: 151.1) with 68.5 in BHUs and 121.1 in RHCs. Among provinces, mean caseload of Pneumonia and Diarrhea in Punjab was 115.8 and 168.3, respectively while in Sindh, it was 58.4 and 70.3, respectively. This shows that case load for these illnesses per facility was nearly double

in Punjab as compared to Sindh. In contrast to a common belief that Diarrhea is the disease of summers, evaluation findings revealed high caseload of Diarrhea in winters with 94.8 mean number of cases per facility as compared to 72.8 mean number of cases of Pneumonia in the surveyed facilities.

As compared to findings of PDHS 2017-18, this caseload depicted improvement in care seeking behaviors of the communities for U5 Pneumonia and Diarrhea, with more children being taken to the facility for management. The role of LHWs was pivotal in this regard as they served as a link between the households and health facilities for timely referral and treatment of sick kids from their catchment population, as one of the facility in-charges described, *“People are not only receiving awareness and education through community health workers (LHWs) but are also being timely referred to the nearest health facility for proper management.”*

Table 13: Monthly Cases of U5 Pneumonia at Health Facilities

Measures of central tendency for monthly cases of U5 Pneumonia at surveyed health facilities, by province and type of facility

	Mean	Minimum	Maximum	Std. Deviation	Number of Facilities
Caseload of U5 Pneumonia	72.8	0.0	723.0	125.9	48
By Province					
Punjab	115.8	0.0	723.0	206.5	36
Sindh	58.4	0.0	450.0	83.9	12
By Type of Facility					
BHU	45.9	0.0	188.0	49.4	24
RHC	99.6	0.0	723.0	168.7	24
Caseload of U5 Diarrhea	94.8	0.0	1000.0	151.1	48
By Province					
Punjab	168.3	70.3	68.5	121.1	36
Sindh	70.3	0.0	209.0	55.2	12
By Type of Facility					
BHU	68.5	0.0	350.0	71.6	24
RHC	121.1	0.0	1000.0	200.2	24

Prescribing Behaviors of Healthcare Providers – In each of the surveyed facility, prescriptions of Pneumonia and Diarrhea were reviewed and information was captured to assess the prescribing behaviors of healthcare providers and dispensing practices at the health facilities (Table 14). It included information on classification of disease as per IMNCI guidelines and medicines prescribed for the treatment. With ten prescriptions from each surveyed facilities, total of 480 prescriptions were reviewed and out of these, 258 (53.8%) were Diarrhea cases and 222 (46.2)

were Pneumonia cases. Among these prescriptions, 40.0% were girls and 60.0% were boys, which was 45.2% girls and 54.8% boys at the time of mid-term evaluation.

Among prescriptions of U5 Pneumonia cases, nearly half of the cases were not classified as per IMNCI guidelines and situation was better in Sindh (73.5% cases of U5 Pneumonia classified) as compared to Punjab (only 7.5% of the U5 Pneumonia cases classified). Findings of the assessment revealed that Amoxicillin was prescribed in any formulation in 71.6% of the prescriptions, 89.6% in Punjab and 63.9% in Sindh. However, Amox DT was prescribed in only 30.2% of the prescriptions. While there is marked improvement in prescription of some form of antibiotic, the prescribing behavior at public facilities were influenced with the type of formulation available at the health facilities. As seen in Punjab where majority of the facilities had availability of syrups, Amox DT was prescribed in only 3.3% of the reviewed U5 Pneumonia prescriptions. In addition to Amoxicillin and Bronchodilators, 93.2% of the U5 Pneumonia prescriptions had other medications, which included antibiotics, anti-pyretic medicines and steam inhalation.

Table 14: Prescribing Behaviors of Health Care Providers for U5 Pneumonia

Percentage of U5 Pneumonia cases classified as per IMNCI Guidelines at surveyed health facilities, by province, type of facility and gender of the child

Prescribing Behaviors	Overall	By Province		By Type of Facility		By Gender	
		Punjab	Sindh	BHU	RHC	Female	Male
Pneumonia Classification							
Not classified	46.4%	92.5%	26.5%	40.9%	51.8%	51.8%	43.1%
Cough & Cold	20.3%	0.0%	29.0%	20.0%	20.5%	15.3%	23.4%
Pneumonia	28.4%	7.5%	37.4%	33.6%	23.2%	28.2%	28.5%
Severe Pneumonia	5.0%	0.0%	7.1%	5.5%	4.5%	4.7%	5.1%
Pneumonia Management							
Amoxicillin Prescribed	71.6%	89.6%	63.9%	83.6%	59.8%	72.9%	70.8%
Amox DT Prescribed	30.2%	3.3%	46.5%	41.3%	14.9%	29.0%	30.9%
Bronchodilator Prescribed	32.4%	26.9%	34.8%	40.0%	25.0%	30.6%	33.6%
Other Medication	93.2%	98.5%	91.0%	90.0%	96.4%	91.8%	94.2%

Total Prescriptions Reviewed	222	67	155	110	112	85	137
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Total of 258 prescriptions of U5 Diarrhea cases were reviewed from the surveyed facilities (Table 15). Among reviewed prescriptions, nearly two-third of the U5 Diarrhea cases (63.8%) were classified as per IMNCI guidelines. Similar to the findings of Pneumonia prescriptions, the situation was much better in Sindh (78.5% U5 Diarrhea cases classified) as compared to Punjab (only 7.5% of the U5 Pneumonia cases classified). Findings of the assessment revealed that Zinc was prescribed in any formulation in 70.2% of the prescriptions (52.8% in Punjab and 74.6% in Sindh) and among these prescriptions, Zn DT was prescribed in only 15.5% of the prescriptions. While ORS was prescribed in 51.6% of the U5 Diarrhea prescriptions, Low Osmolar ORS was prescribed in only 27.1% of the prescriptions. A large number of prescriptions (84.5%) had other antibiotics as well, which included Metronidazole, Co-Amoxiclav and Sulfamethoxazole/Trimethoprim. Total of 8.9% of the prescriptions included IV Fluids which commensurate with the 8.1% of cases being classified as Severe Dehydration or Persistent Diarrhea.

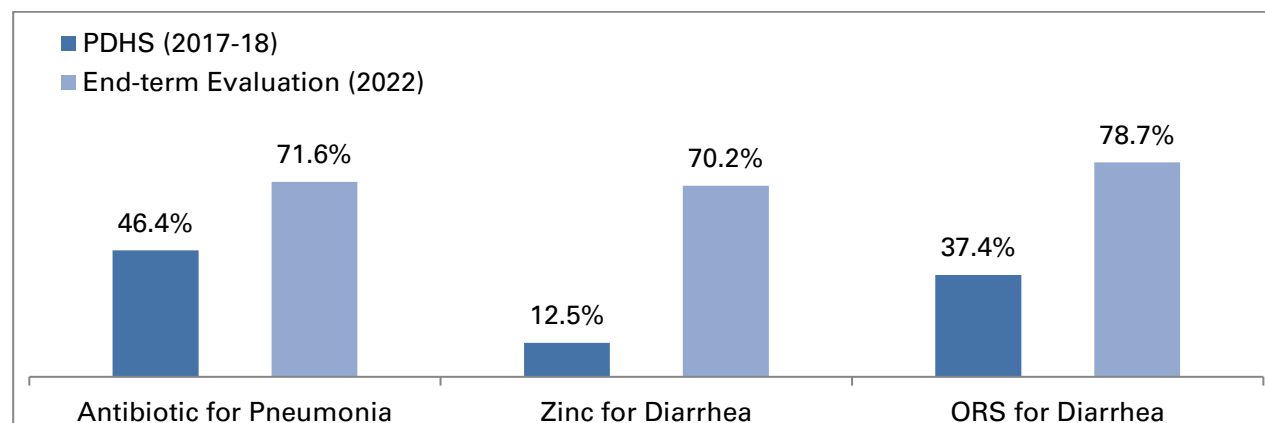
Table 15: Prescribing Behaviors of Health Care Providers for Management of U5 Diarrhea

Percentage of U5 Diarrhea cases classified as per IMNCI Guidelines at surveyed health facilities, by province, type of facility and gender of the child

Classification as per IMNCI Guidelines	Overall	By Province		By Facility Type		By Gender	
		Punjab	Sindh	BHU	RHC	Female	Male
Diarrhea Classification							
Not classified	36.0%	92.5%	21.5%	42.3%	29.7%	34.6%	37.1%
Severe Dehydration	6.2%	1.9%	7.3%	0.8%	11.7%	5.6%	6.6%
Some Dehydration	24.4%	1.9%	30.2%	18.5%	30.5%	27.1%	22.5%
No Dehydration	31.4%	0.0%	39.5%	37.7%	25.0%	31.8%	31.1%
Persistent Diarrhea	1.9%	3.8%	1.5%	0.8%	3.1%	0.9%	2.6%
Diarrhea Management							
Zinc Prescribed	70.2%	52.8%	74.6%	76.9%	63.3%	71.0%	69.5%
Zn DT Prescribed	15.5%	0.0%	18.3%	22.0%	7.4%	13.2%	17.1%
ORS Prescribed	51.6%	49.1%	52.2%	56.9%	46.1%	49.5%	53.0%
LO ORS Prescribed	27.1%	7.7%	31.8%	31.1%	22.0%	30.2%	25.0%
IV Fluid Prescribed	8.9%	5.7%	9.8%	3.1%	14.8%	10.3%	7.9%
Other Medication	84.5%	92.5%	82.4%	73.1%	96.1%	82.2%	86.1%
Number of Prescriptions	258	53	205	130	128	107	151

Comparison of prescribing behaviors of healthcare providers with findings of Pakistan Demographic and Health Survey (PDHS) 2017-18, there have been marked improvements in prescription of updated commodities. Use of antibiotics, including Amoxicillin for U5 Pneumonia increased from 46.4% to 71.6%. Similarly, in U5 Diarrhea cases, use of Zinc and ORS showed marked improvement as prescription of Zinc increased from 12.5% to 70.2% and prescription of ORS increased from 37.4% to 78.7%.

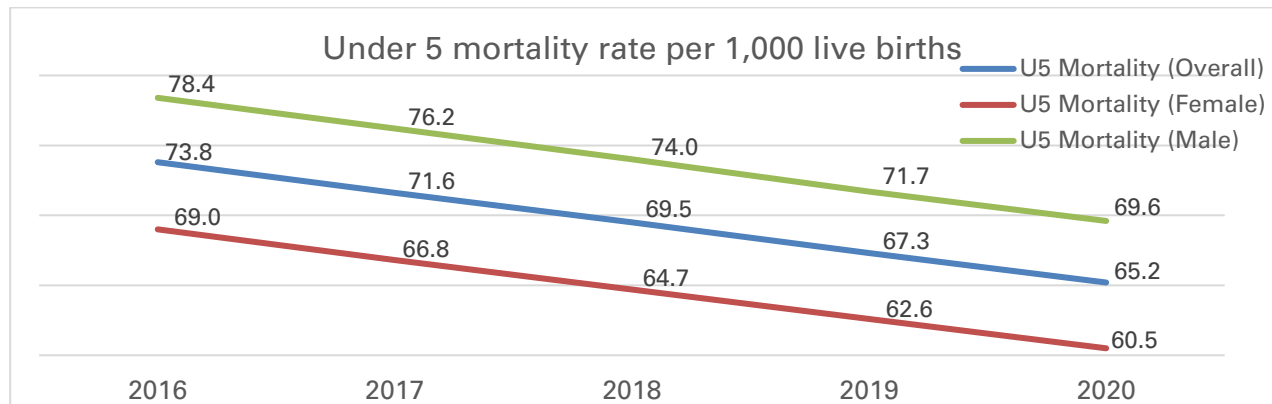
Figure 14: Comparison of Prescribing Behaviors



Finding: There has been steady decrease in overall child mortality in Pakistan over the project life.

In order to ascertain the overall trends of childhood mortality in Pakistan, estimates developed by the UN Inter-agency Group for Child Mortality Estimation (UNICEF, WHO, World Bank, UN DESA Population Division), corresponding to project years were analyzed to illustrate the change in childhood mortality in Pakistan with reference to project implementation timeframe of 2016 to 2020. As shown in figure 15, U5 mortality rates had reduced steadily in Pakistan. It was 73.8 deaths per 1,000 live births in 2016, which had reduced to 65.2 in 2020. There had been marked variations on the basis of gender of the child. For girls, it reduced from 69.0 deaths per 1,000 live births to 60.5 and for boys, it reduced from 78.4 to 69.6. Although the reduction was not directly and completely attributable to project interventions but it had highlighted the contribution of P&D Project in improving child survival in Pakistan.

Figure 15: Trends in U5 Mortality Rate in Pakistan



Finding: During the project life, there were certain unexpected effects, both positive and negative, on the management outcomes.

The project observed certain unexpected effects at policy, management and service delivery levels. On the positive side, dispersible tablets and Lo-ORS were included in the EML and EPHS under UHC Benefit Packages of uncovered provinces. Although there was no direct advocacy with these provinces but their government officials were part of the federal level coordinating platforms, including RMNCAH&N TWG. Another positive effect of the project was observed during upgrading of DHIS tools in Punjab and Sindh provinces. It is always difficult to revise DHIS tools due to wastage of existing printed forms and registers. So, while the childhood indicators were being updated, the provincial managers harnessed the opportunity to update indicators on antenatal care, immunization and breast-feeding practices.

Among negative unexpected effects, evaluation team could identify the issues with acceptance of dispersible tablets by mothers and caregivers for use in children. Since dispersible tablets were not common in use, they had limited exposure and it was difficult for them to understand the difference between the regular and dispersible tablets. This effect was identified during the mid-term evaluation and with passage of time, acceptance has improved, particularly at public facilities. Another negative effect was inability of Punjab province to procure dispersible tablets as there were not enough pharmaceutical bidders to meet the codal formalities of procurement. Pharmaceutical industry has preference and better capacities for syrup manufacturing so they did not participate in the bidding, forcing government to procure syrups.

EQ: To what extent the programme has been able to contribute to ownership and leadership of the Federal, provincial/area DOHs and inform evidence-based decision making or factors/ challenges in influencing the achievement or non-achievement of outcomes?

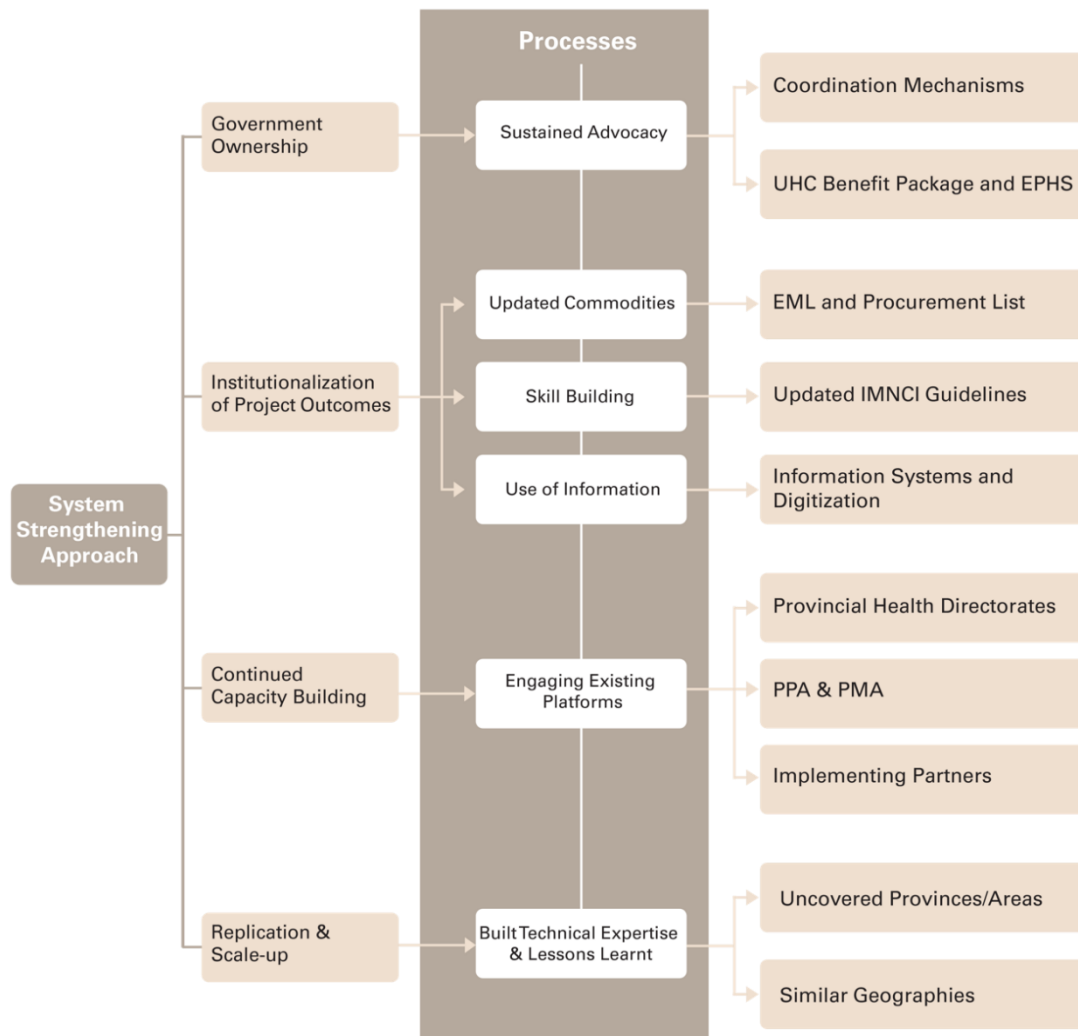
Finding: Through establishing systems and structures, P&D Project had built ownership of the governments and ensured achievement of outcomes.

- Systems strengthening approach facilitated the achievement and institutionalization of project outcomes.

- Resolute government will and commitment to improve child survival was ensured through sustained advocacy.

P&D Project took a system strengthening approach for implementation of activities and achievement of desired results. Following diagram describes various dimensions of systems strengthening activities that ensured government’s ownership of interventions and their institutionalization.

Figure 16: Project Processes for Government Ownership and Change in Policies



Advocacy activities were identified at the landscape analysis level guided the implementation and project had built government ownership despite frequent postings of key government officials, particularly in Sindh, leading to improved availability of updated commodities. For capacity building of healthcare providers from both public and private sectors, engagement of their professional association proved beneficial as they continued these trainings even after the funding of the project ceased. Another important aspect of policy process is knowledge

management and as the project was carried out in provinces of Sindh and Punjab, it had shared its lessons learnt through national platforms with uncovered provinces and regions of the country. This led to updating of essential list of medicines in those provinces and one of the indirect effects of the P&D Project included the inclusion of updated commodities in uncovered provinces and regions of Pakistan during localization of EPHS.

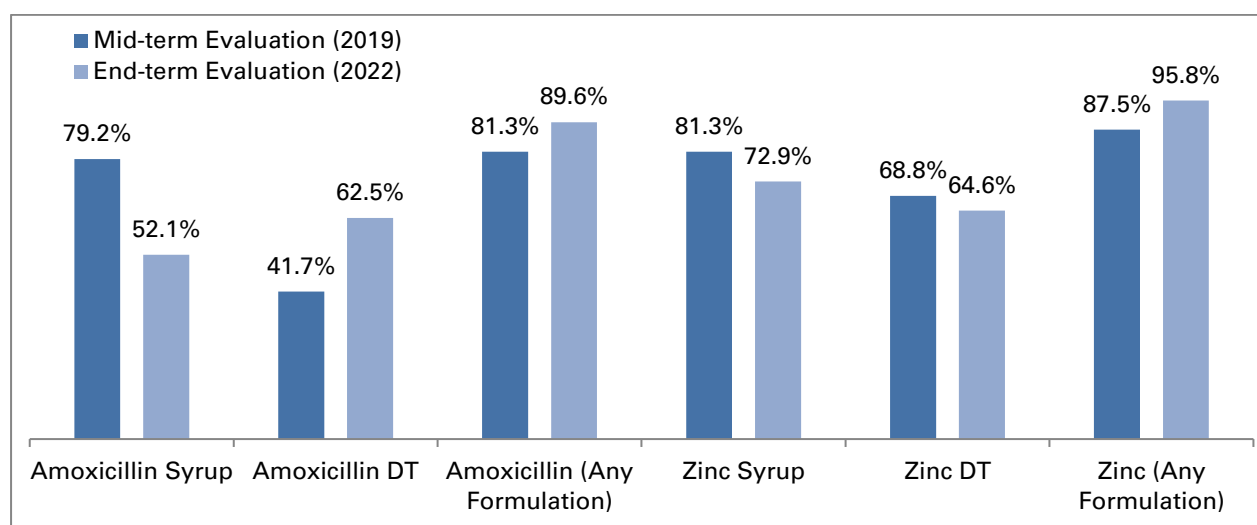
EQ: To what extent the programme learned and evolved over the 6 years and whether there were other alternatives, more cost-effective strategies available to reach intended results?

Finding: Recommendations of landscape analysis, mid-term evaluation were adopted and course corrections were made to achieve the targets.

- Comparing with results of MTE, child survival outcomes showed improvement over the years and sustenance after closure of project activities.
- Community awareness was not part of the initial scope but was rolled out through LHWs, which translated into increased care seeking from health facilities.
- Project activities were cost-effective to equip health facilities with updated commodities.

Comparing it to the results of Mid-term Evaluation, the status of commodities at surveyed facilities showed a shift to dispersible tablets, particularly Amoxicillin. At mid-term, 79.2% of surveyed facilities had Amoxicillin syrup and 41.7% had Amox DT, whereas at end-term evaluation, availability of syrup reduced to 52.1% and availability of DT increased to 62.5%. Overall, as compared to the baseline, availability of pediatric formulations of Amoxicillin and Zinc at surveyed health facilities increased from 81.3% to 89.6% and from 87.5% to 95.8, respectively. Despite initiation of procurement of DTs in Punjab, lack of minimum required number of bidders (pharma companies) led to procurement of syrup.

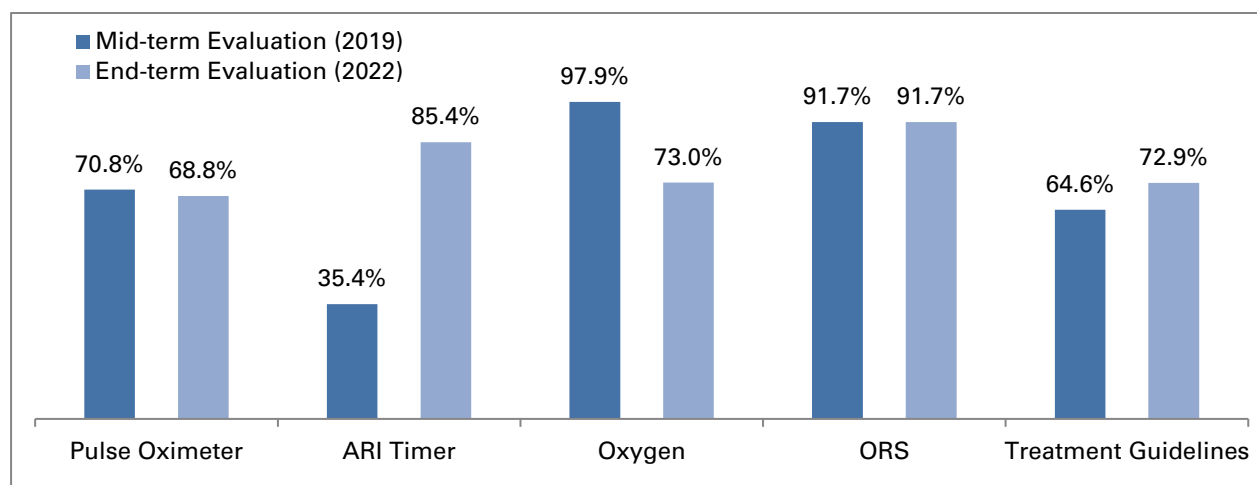
Figure 17: Comparison of Current Status of Updated Commodities with MTE



Current status of equipment and supplies to manage U5 Pneumonia and Diarrhea at public facilities showed mixed findings. As compared to mid-term evaluation, availability of ORS

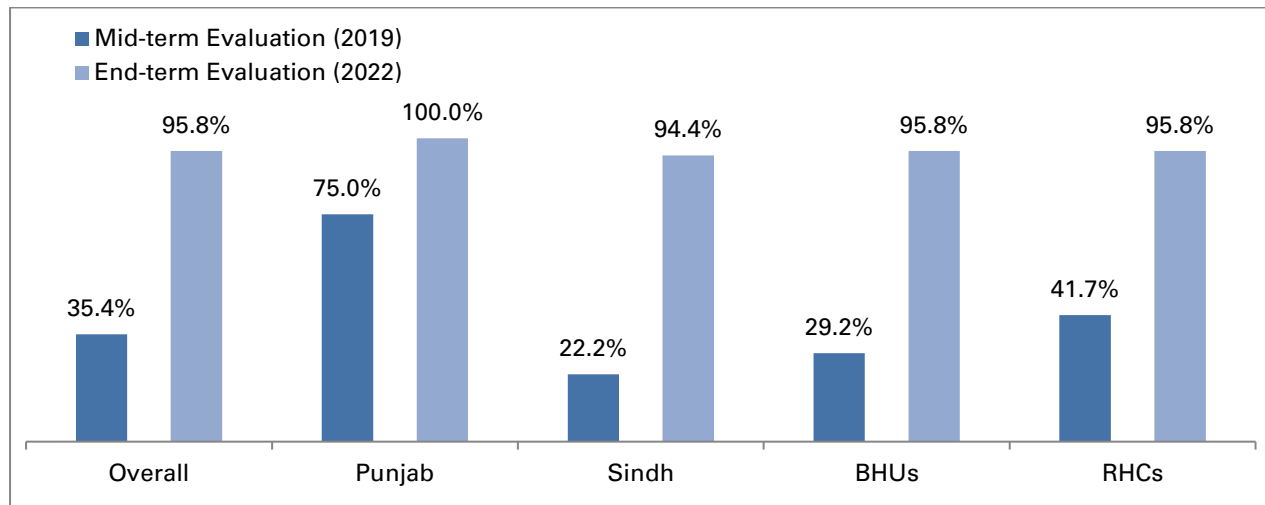
remained the same (91.7%), whereas availability of ARI Timer increased from 35.4% to 85.4% and availability of Treatment Guidelines increased from 64.6% to 72.9%. However, availability of Pulse Oximeter and Oxygen at surveyed facilities declined from 70.8% to 68.8% and from 97.9% to 73.0%, respectively.

Figure 18: Comparison of Current Status of Updated Equipment & Supplies with MTE



Information was analyzed to compare the current status of IMNCI trainings at surveyed facilities with the findings of mid-term evaluation. There have been marked improvement in number of health facilities having at least one of the healthcare providers trained or oriented on IMNCI, from 35.4% at the time of mid-term evaluation in 2019 to 95.8% at the time of end-term evaluation in 2022. Comparing the provincial variations, availability of IMNCI trained staff increased from 75.0% to 100.0% in Punjab and from 22.2% to 95.8% in Sindh. Similarly, among the primary healthcare facilities, it increased from 29.2% in BHUs and 41.7% in RHCs to 95.8% at end-term evaluation.

Figure 19: Comparison of IMNCI Trainings at Surveyed Facilities with MTE



Overall, the project activities were found to be cost-effective as it only costed 110-160 USD to equip health facilities with updated commodities. As compared to overall facility annual expenditures, the cost of equipping the facilities to enhance their readiness to treat U5 P&D was found quite affordable.

3.2.6. SUSTAINABILITY

Sustainability was measured whether the benefits of project are likely to continue after UNICEF funding has been withdrawn.

EQ: What evidence exists to see the likelihood of the project results are sustained and will be adopted by the Government to ensure that the goal of the programme is achieved?

Finding: Taking systems strengthening approach, the project had contributed to institutionalizing multiple interventions, for sustenance beyond the project life.

- Strengthening of information systems was carried out through updation of DHIS tools to include Pneumonia and Diarrhea commodities, roll-out of DHIS-2 with updated commodities, and customization and implementation of HLMIS.
- Key policies and official guidelines were updated, including IMNCI Guidelines focusing on child survival and including updated commodities within EML, procurement lists and government purchase orders.

ETE findings revealed that sustainability has remained a key focus of the project to ensure improved management of P&D among children, even after the closure of the project. Prioritizing the continuity of U5 childhood survival in Pakistan, the P&D Project adopted systems strengthening approach, and contributed to institutionalizing multiple interventions for sustenance beyond the project life. The highlights of the significant contributions of the project included strengthening of information systems through updation of DHIS tools to include P&D

commodities, rolling-out of DHIS-2 with updated commodities, as well as customization and implementation of HLMIS.

As a part of the process, the project extended support to national and provincial governments for updating DHIS tools, according to their alignment with IMNCI guidelines. DHIS monthly report form (Medicine & Vaccine Reporting Form) was revised with the inclusion of P&D commodities (e.g., Zn and Amox DT, and Lo-ORS) along with sub-categorization of age & gender. Further, pneumonia and diarrhea have been sub-classified to capture the nature of disease presentation to assist appropriate treatment and management, as well as disease outcome. According to a key informant of the health department, *“Refinement of DHIS was an important contribution of this project for diagnosis and management of Pneumonia and Diarrhea”*. Further, P&D Project supported in customization of DHIS 2 for meeting the specific needs at the country level and rolling-out implementation of DHIS2 at provincial levels. The project facilitated a 4-day provincial Training of Trainers (TOTs) on revised DHIS for the public sector, where district officials participated. The TOTs were followed by trickle-down training at districts levels to enhance the knowledge and skills of the service providers. Furthermore, DHIS2 was piloted within the intervention districts of Punjab to facilitate health managers on use of information and decision-making, however, efforts are being continued for its rolling-out in Sindh. Moreover, the project also supported its integration with the logistics management information system (HLMIS). One of the key respondents highlighted the significance of real-time data and remarked, *“The existing health information system provided us a retrospective view of the past month.... there is a dire need for real-time data transfer so that we could take timely decisions for corrective measures”*.

The project provided technical assistance in updation of key policies and official guidelines including IMNCI guidelines focusing on child survival as well as including updated commodities within EML, procurement lists, and government purchase orders. The project also supported training of healthcare providers on revised abridged curriculum, availability of commodities and essential equipment for improving service delivery. A key informant acknowledged, *“the IMNCI strategy... promoted by UNICEF has proved to be efficient and cost effective for U5 child survival from P&D and other diseases”*. Another stakeholder commented, *“it was definitely a success story as evident from the use of P&D updated commodities treatment at the community level”*.

Overall, the analysis of ETE revealed that the institutionalization of the project interventions has been triggered through multi-stakeholders' engagements, involvement of various platforms, equipping the relevant staff with modernized knowledge and skills, and promoting real-time reporting. As one of the informants stated, *“the efforts of P&D Project for sustainability and institutionalization of interventions are remarkable... as these are well entrenched in the health system, such as in the form of EPHS, EML, DHIS2 and so on...”*. Another informant added, *“though it’s a government discourse to develop systems and their use, but... the P&D Project did a good job for health systems strengthening...”*. Additionally, a stakeholder highlighted the role of capacity building for achieving project sustainability, and commented, *“The knowledgeable and trained staff are fundamental for the sustenance of our health system ... and UNICEF contributed effectively in capacity building of the healthcare providers”*.

EQ: What internal/external factors and drivers contribute to or constrain the sustainability of the project?

Finding:

Facilitators for sustainability

- Increased political will and commitment for improving child survival in Pakistan
- Institutionalized advocacy and decision-making platforms for ownership
- Use of existing governmental systems and structures for implementation
- District and facility level availability of trainers on IMNCI
- Improved capacity of healthcare providers for better child health services

Barriers/constraints affecting sustainability

- Limited local production of updated commodities (mainly Dispersible Tablets)
- Concerns of anti-microbial resistance arising from provision of Amox DT to LHWs
- Translation of IMNCI guidelines into local languages for community workers

Prospects for replication and scale up in remaining areas/provinces

- Updated federal and provincial EPHS reflect the recognition of updated commodities for managing U5 Pneumonia and Diarrhea

From the sustainability viewpoint, it is learned during ETE that the P&D Project faced various internal and external factors, which either contributed to or restrained the sustainability of the project. These factors are also known as facilitators or barriers affecting the project sustainability.

As far as facilitators for the sustainability of the project are concerned, the most promising factor included strong political will and commitment for improving child survival efforts at the country level. Since this project was designed to strengthen existing health systems and strive to achieve the international/national pledges for averting childhood mortality, therefore, P&D Project was better able to perform across the two provinces. Further, the project majorly engaged existing systems for implementation and institutionalization of the advocacy and decision-making forums, through engaging key stakeholders for promoting ownership. These forums provided platforms for policy dialogues for introducing innovative management approaches to childhood illnesses. Furthermore, IMNCI guidelines were revised aligned with GAPPD and updated P&D commodities became part of EML. Different modules of IMNCI for care providers, community workers and LHW curricula were also reviewed by the notified working group using RMNCAH platform, followed by capacity building/orientation of care providers on revised modules to steer IMNCI implementation. Another example of institutionalization of advocacy and decision-making platform is evident from the formulation of Child Survival Groups/TWGs at provincial level. These TWGs/CSGs resulted into improved stakeholder engagement, enhanced inter and intra provincial (MNCHP, LHWP, PPA) communication and coordination, strengthen linkages with media and child health group, and minimize knowledge management gaps. These TWGs/CSGs also mobilized PPA, PMA and pharma industry representatives on child survival issues focusing P&D. A stakeholder in this regard remarked, *"...use of existing governmental systems and structures for implementation of P&D Project ensured institutionalization and project sustainability"*.

In order to ensure sustainability, the project strengthened the capacities and skills of districts and facility-level staff on revised IMNCI guidelines. The project invested in building capacities of

district-level master trainers, who conducted trickle-down trainings at the facility level to improve capacities of local providers for better management of childhood illnesses and provision of child health services. As informed by a trained healthcare provider, *“the trainings on IMNCI equipped us with advanced knowledge and skills... this capacity-building initiative will help us to deliver services in a better manner for a long time...”*

Besides the facilitating factors, the ETE also revealed some constraints, faced by the P&D project, which challenged the project sustainability. For instance, limited local production of updated P&D commodities, particularly DTs. The lack of incentive for pharmaceuticals to manufacture low-cost P&D updated commodities such as Amox DT and Zn DT for relatively less profit, as compared to 2nd or 3rd generation antibiotics was a major barrier in the local production. Generally, DRAP requires a fresh registration from the pharmaceutical industry for any change in formulation, such as in the case of Zn DT & Amox DTs in contrast to routine tablets or syrup, which was seen as a cause to delay. Further, a general concern was observed regarding anti-microbial resistance from the provision of Amox DTs to LHWs in the intervention districts, as stated by a stakeholder, *“in order to control the rise of antimicrobial resistance, the government restrained provision of antibiotics to LHWs”*. Furthermore, there is also a need to translate IMNCI guidelines into local language to enhance its use for community workers, which affected the sustainability of the project.

Along with facilitators and barriers, ETE findings also highlighted the prospects for replication and scale-up, which are also significant to be documented with respect to the project sustainability. For example, recognition of updated P&D commodities for managing U5 P&D is evident from its inclusion in federal and provincial EPHS. The updated commodities (e.g., DTs, Lo-ORS, and Co-packaging) are now part of the endorsed Essential Packages of Health Services (EPHS) for PHC & Community in both Sindh and Punjab. Moreover, updated commodities (Amox DT and Zn DT and Lo-ORS) have also been included in the revised Essential Medicine List (EML) due to the project continued and effective advocacy.

EQ: What is required to ensure prospects of sustainability of the project outcomes and the potential for replication or scale-up of good practices and/or innovative approaches?

Findings: Increased government ownership and advocacy efforts are required for replication of the innovative project activities in other provinces /areas.

The analysis found that knowledge management was a critical component to ensure sustainability. Since sustainability relies heavily on coordination, knowledge sharing and use of information, therefore, the project adopted it as a good practice that could be scaled up and replicated for promoting a culture of mutual knowledge sharing to avoid duplication of efforts. It was found in ETE analysis that the system strengthening approach of P&D Project had the potential and prospect of sustainability of the project outcomes and scaling up as a good practice. Overall, the systems strengthening approach facilitated government ownership, institutionalization of project outcomes, and continued capacity building. These were achieved through sustained advocacy, enhanced use of updated commodities, skill building of healthcare providers, engaging existing platforms, and nurturing the culture of use of information through

rolling out of DHIS2 and establishment of HLMIS. All these good practices may be adopted for replication and scalability in uncovered areas/provinces, along with project technical expertise built and lessons learned over the period of time.

Learning from the ETE of the P&D project, the inclusion and prioritization of cost-effective P&D interventions in the UHC Benefit Package, EML, procurement list, and EPHS through coordinated mechanisms also paved the ways for the sustainability of child survival activities in Pakistan. UNICEF played a vibrant role and provided appreciable support in policy formulation as well as alignment of the project approaches with international best practices, under GAPPD and SDGs. Further, the resolution of the government and other stakeholders is evident in the form of updation of IMNCI guidelines, inclusion of updated commodities in EML and Procurement Lists, updating of DHIS reporting tools, and endorsement of EPHS. Another good practice to be replicated is the use of coordination platforms and forums to ensure cohesiveness amongst all the stakeholders. There are certain innovative approaches that can be integrated into the scaled-up/replication, along with community and outreach involvement. Furthermore, the digitization and strengthening of information systems for reporting and informed decision-making is also a good example for other similar geographies.

Based on the P&D project's success, the government has requested UNICEF to develop a strategic plan for the whole country to roll it out. UNICEF is launching another project called 'SPRINT' in Bahawalnagar, and Muzaffargarh, on an expanded list of P&D indicators and further equipment. This new project can be very beneficial in ensuring sustainability and will provide the opportunity for replication and scale up.

3.2.7. CROSS CUTTING AREAS (Gender, Equity, Human Rights)

Evaluation of cross cutting areas was determined through whether gender, equity and human rights were considered during intervention designing and implementation.

EQ: To what extent the cross-cutting issues such as gender, equity, disability and human rights-based approaches were considered at various levels of planning, implementation, and overall decision making?

Findings: UNICEF P&D Project has promoted gender-responsive and human rights-based activities to address gender discrimination and inequity across the marginalized, disable and vulnerable communities of Punjab and Sindh province, through:

- Focus on bringing equity while targeting project funding to districts of Southern Punjab and Sindh – having highest childhood mortality in Pakistan
- Reinforcing collection of gender-disaggregated data
- Female oriented project leadership and management
- Raising voice for female empowerment at all platforms

UNICEF P&D Project has strived hard on promoting gender mainstreaming, equity, and human rights-based approach during project planning and implementation. The project recognized the UNICEF mandate for gender equality, providing equal opportunities and rights to access P&D updated commodities to improve diagnosis and management of P&D amongst girls and boys

children. As part of the broader UN 2030 agenda of 'leaving no-one behind', the UNICEF project affirmed its role as the gatekeeper for the 'right to health' for U5 children, particularly focusing on poor and marginalized communities in Sindh and Punjab provinces.

During the conceptualization of the project, UNICEF realized the fact that women and girls face greater disadvantages in accessing healthcare services due to their gender. Such inequalities have an intergenerational impact, affecting girls' children and restricting them to enjoy equal rights to maintain their health within a fair environment. Given the context, UNICEF project promoted the girls' empowerment to eliminate gender discrimination and inequality, applying human rights lens. The project focused on bringing equity while targeting project funding to districts of Southern Punjab and Sindh, having the highest childhood mortality in Pakistan. As remarked by UNICEF team representative, *"the project emphasis on averting P&D related deaths amongst young children of vulnerable communities, focusing girls (being more at risk)... we have adopted gender-responsive and human rights responsive activities to address the gender inequality in Pakistan"*. Another stakeholder highlighted the gender inequality context in Pakistan and commented on the efforts of the UNICEF project,

"in the cultural milieu and patriarchal values of Pakistan society, female empowerment, and autonomy for healthcare decision making has always remained a contested issue... we are trapped in a vicious cycle of traditional patriarchal norms, where boys are always preferred over girls in all areas, including health and education... the UNICEF project paved the way for female empowerment, and enabled to collect gender-disaggregated data through the use of DHIS2".

The project efforts for gender mainstreaming are also evident from the project leadership and management, as the project had a female-oriented team, including project manager and project coordinator. However, later on, a male member was designed as project manager, who also carried forward the agenda of female empowerment and gender equality. The project promoted gender equality and women empowerment at community level through engaging female community outreach workers (LHS and LHWs) who worked at the grass root level to promote healthy behaviors. Since the project involved provision of commodities including gadgets like ARI timers to these LHWs, they were better equipped and empowered for improved performance. The project also aimed to improve Pneumonia and Diarrhea treatment equally for both female and male child, without any discrimination.

Overall, this project adopted a gender-responsive approach in designing, planning, implementation, and decision-making. Project utilized TWGs and RMNCAH&N meetings and special events like global Pneumonia Day to raise voice for female empowerment. One of the project members stated, *"This project promoted female empowerment agenda at policy level addressed the discriminated status of young girls, which caused inequality... and denying them basic human rights like access to health care and maintain healthy lifestyle"*.

EQ: Are the services provided gender responsive and was a gender and human rights-based approach considered during implementation?

Finding: Gender, equity, disability and human rights-based approaches were integral part of project planning and implementation.

- Gender sub-categorization of under5 Pneumonia and Diarrhea cases in customized DHIS2 tools
- Gender responsiveness in capacity building activities for care providers
- Project interventions focused on both public and private sector
- Strengthening of PHC facilities serving rural and marginalized population
- Human rights-based approach considered during implementation, like provision of modern diagnostics to empower LHWs

As mentioned in the findings of the above question, gender, equity and human rights were an integral part of project planning and implementation. The project had given an increased emphasis on the significance of gender-responsive and human rights-based approaches during project implementation. The project followed the UNICEF mandate to secure individuals' human rights and incorporating them into their policy making processes and implementation activities. In this regard, a UNICEF project team member shared, *"gender and human rights were the cross-cutting component of the project, following the compliance of UN policies and programmes, including gender equality, humanitarian assistance and development..."*.

Project started off in 2016 to bring policies to address gender barriers of U5 children – girls and boys. The implementation of project activities hit the traditional cycle of gender inequality, causing greater survival of boys than girls, through reinforcing child survival policies and averting child mortality. Adopting the systems strengthening approach, the UNICEF project enabled collection of gender-disaggregated data through inclusion of gender sub-categorization of under5 P&D cases in customized DHIS2 tools. In this regard, a federal level representative stated, *"Gender discrimination is far less today... People do seek treatment for girl child... this project informed the gender analysis..., and now we are able to see it from sex-disaggregated data of DHIS2, particularly in case of Punjab"*.

Another activity addressing gender mainstreaming is evident from the training on IMNCI. UNICEF project team planned and conducted capacity building activities on IMNCI in a gender responsiveness manner for healthcare providers, where due emphasis was given to the female representation. Training statistics revealed that majority of the females attended trainings on IMNCI, with higher participation of LHVs from both provinces. One of the UNICEF representatives mentioned, *"as you may see from the provincial level training data, UNICEF contributed fairly in female education and skill enhancement for P&D management among children of their communities, particularly serving in rural areas"*.

Addressing equity and providing equal opportunities, the P&D Project strengthened the PHC facilities, especially serving rural and marginalized population, through provision of updated commodities and equipment for improving diagnosis and management of P&D among children. It also indicated that the project highly emphasized the rights-based approach during implementation, like the provision of modern diagnostics to empower community workers (e.g.,

LHWs). Further, the UNICEF project interventions focused on both public and private sectors, promoting the UN agenda of 'leaving no-one behind'.

A provincial-level stakeholder commented, "every girl and boy deserve an equal chance to thrive and survive... this project challenged the gender discrimination in our society, disproportionately affecting the girls' access to healthcare services, and invested to reach every girl child, including most vulnerable". For the purposes, UNICEF project also used social media for awareness-raising, using gender-responsive social media posts.

EQ: To what extent the process of managing and mitigating risks within project (including internal and external processes) was achieved to meaningfully integrate gender, equity and human rights?

Finding: The project fully contributed in the integration of gender, equity, disability and human rights during the implementation of all activities, through research and evaluations for accountability and informed decision-making.

Following the project management practices, the project identified the potential risks, which may affect the internal and external processes of the project. Since this project was mainly aimed for policy change, policy translation, policy implementation, and knowledge management, therefore well-thought mitigation strategies were adopted for addressing risks related to the integration of gender and human rights, to ensure smooth implementation of the project activities.

In the purview of meaningful integration of gender, equity, disability and human rights into the project activities, UNICEF's project advocacy efforts at both federal and provincial levels were widely recognized. More concisely, following factors were found at the internal and external levels:

- Internal factors

As an internal facilitating factor, UNICEF project team laid strong emphasis on aligning project activities with GAPPD, SDG targets and national/international commitments, under supportive leadership and management. The project built continuous liaison in a cohesive manner with both federal and provincial governments, along with dedicated resources to integrate gender and equity lens into project activities to achieve desired outcomes. On the other hand, key hindering factors included the prevailing cultural norms and practices, and paying less attention to women empowerment, affecting the project processes for gender mainstreaming, promoting equity and human rights. In the context of UNICEF mandate, the project fully addressed such issues, through female dominating project leadership and management. Further, this project also paid great attention to the capacity building of healthcare providers with higher female participation to promote women empowerment.

- External factors

The integration of gender, equity and human rights was based on UNICEF drive for 'leaving no one behind' through creating an enabling and conducive environment. The project extended its efforts to increase the gender, equity and human rights integration during the implementation of all activities to address the health inequalities and vulnerabilities, through research and

evaluations for informed decision-making. The same was also considered and catered in the context of Covid-19. However, the agenda of gender, equity disability and human rights integrations still required attention, considering the cultural settings of Pakistan.

While responding to the process of managing and mitigating risks within project to meaningfully integrate gender, equity disability and human rights, a UNICEF team members said, *“We had rigorous project monitoring mechanisms for assuring quality. Also, we have planned and conducted midterm and end-term evaluations to improve project accountability and proposed course corrections for addressing inequalities”*.

EQ: What have been the key lessons and experiences of HCPs, Lady Health Workers and Lady Health Supervisors as agents of change and their contributions to other sectors?

Finding: UNICEF P&D Project recognized the multidimensional role of LHWs, working as a ‘bridge’ between the health system and community. They mainly function to maintain a continuum for extending the reach of the health system and serve as agents of change.

UNICEF P&D recognized the significance and multidimensional role of healthcare providers, LHWs and LHSs, particularly in the context of marginalized and vulnerable populations. As a step forward, the project contributed to building capacities of healthcare providers and strengthening their skills on IMNCI for improving diagnosis and management of P&D among children. Further IEC resource material including booklets and brochures were also provided for their assistance in the delivery of preventive and curative P&D related health services.

Highlighting the project lessons learned, one of the federal officials informed,

“The role of HCPs, LHSs and LHWs was crucial in this project to reach underserved communities, living in rural areas of Sindh and Southern Punjab... who worked as a linchpin to counsel mothers and families on early diagnosis and management of P&D, using updated P&D commodities”.

Embedded within communities, the HCPs and community outreach workers acted as agents of change for this project by bringing P&D management related services to the communities, using culturally appropriate, and physically accessible preventive and curative P&D related health services. As a stakeholder commented, *“healthcare providers, and community outreach are like ‘bridge’ between health system and community. Main function of this bridge is to serve as a social change agent ... maintaining a continuum for extending the reach of the health system”*.

The facility in-charges and community outreach workers also endorsed the efforts of the UNICEF P&D project, as evident from the statement of the facility in-charge,

“Majority of the staff was trained along with hands-on support on the use of P&D updated commodities with the support of UNICEF... these practical demonstrations in the training were helpful. Some staff members, who have not received training are still being oriented regarding P&D by PPHI”.

The community outreach workers also validated the efforts of the project that LHWs in Punjab and many districts of Sindh are trained regarding P&D. As remarked by an LHW, *“We got IMNCI training by UNICEF... LHSs conducted refresher sessions, and also got booklets and posters on P&D”*. Another LHW shared, *“now we know the early sign and symptoms of P&D. If a child has early signs of pneumonia, then we refer her/him to BHU and RHC for treatment, but if we found severe respiratory infection and severe diarrhea then we refer her/him to DHQH”*.

Further, the community outreach workers reported that they feel respected and also appreciated by the community due to their presence and contribution in the community. However, there are certain factors, which influence their relationship with the community as well as their role as agents of change. In this regard, a provincial stakeholder informed, *“... the outreach workers’ competence basically shape community perceptions and their willingness to communicate with outreach, which in turn shape the ability of outreach to fulfil their role as an agent of change...”*. Other stakeholders also appreciated the embeddedness of the UNICEF P&D Project at the community level, boosting the health systems strengthening.

On the other hand, beneficiaries also appreciated the role of HCPs and outreach in changing their behavior and management of P&D cases. Analysis revealed that most of the mothers used home remedies for their children instead of seeking medical advice for P&D management, however, the counselling of outreach workers have changed their behavior, as said by a mother,

“Initially, I used home remedies to treat child pneumonia and diarrhea at home... as I was not aware where to take my child to the nearby hospital for medical check-up or treatment... but my areas outreach workers educated me, from where and how to seek medical advice and follow the prescribed medicine for better health of my children”.

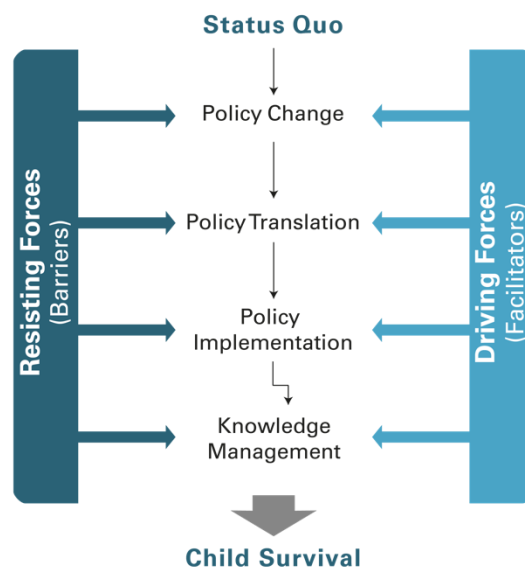
A mother also highlighted in this regard, *“LHWs guide us about how to manage pneumonia and diarrhea at early stage... they have taught us how to use ORS sachets”*. Another mother shared, *“being mother, now I know that antibiotics are used in pneumonia, and ORS and Zinc for diarrhea, due to the guidance of my own community LHWs”*.

4. CONCLUSION AND LESSONS LEARNED

Pneumonia and Diarrhea are leading causes of under-five mortality in Pakistan. UNICEF Project on Accelerating Policy Change, Translation and Implementation for Pneumonia and Diarrhea Commodities in Pakistan supported the federal and provincial governments in building enabling policy environment to improve healthcare services for these major killers of children in Pakistan. Improving child survival is also one of the key health sector priorities and the government has reiterated it in its National Health Vision and 12th Five-Year Plan. The project has played a pivotal role in bringing child survival on policy and reforms agenda. At the start of project, evaluability study and landscape analysis were conducted to guide the project implementation while keeping in view the local context as well as facilitators and barriers of the policy process in the country. Through identifying plausible avenues of advocacy, the project managed to achieve its envisaged targets and milestones, with certain activities completed through no-cost extension.

Project successfully implemented the policy process to update relevant policies and guidelines with a focus on improving management of childhood Pneumonia and Diarrhea. Following the causal chain of policy change, its translation and implementation of actions, project achieved its outcomes of improving availability of updated commodities to manage childhood Pneumonia and Diarrhea. This was achieved through timely identification of facilitators and barriers of the entire policy making process and building strong working relationships with policy makers and planners at all levels (Figure 20). Formal advocacy platforms were established and strengthened at federal and provincial levels in the form of steering committee and technical working groups for building strong linkages and shifting from status quo to increased child survival. In order to achieve planned outcomes and its replication and scale up, the project engaged with relevant stakeholders including the federal ministry, provincial health departments, health directorates, district managers, implementing partners, professional medical associations, pharma industry, facility and community-based staff and regulatory institutions. Key strengths of the project included building and sustaining government ownership through engagement of different platform and coordination mechanisms. Project activities were institutionalized through involvement of regular structures within and outside government. Another key strength was project’s focus on all aspects of improved management of childhood Pneumonia and Diarrhea, including commodity security, capacity building of providers, evidence-based decision making

Figure 20: Policy Process for P&D Project



through augmentation of information systems and referral from community by LHWs. Among limitations of the project, community awareness remained low due to lack of extensive mass media campaign on U5 Pneumonia and Diarrhea. Further, there was limited budget available with the project for capacity building of healthcare providers on IMNCI.

In the following paragraphs, policy process for project interventions and outcomes is described with specific conclusions under each area.

4.1. Policy Change

Resolute political will and commitment was critical for initiating the policy process and steering the policy change, which was evident from inclusion of child survival in all strategic documents, including National Health Vision and National Action Plan. Specific conclusion under policy change are as follows:

1. Through sustained advocacy at federal and provincial platforms, the project had built government ownership around its interventions.
2. Development and implementation of joint accountability frameworks supported the implementation of project activities to update government policies and guidelines.
3. Updated commodities were included in the Essential Medicines List and Essential Package of Health Services, which will also support the sustainability of project interventions.
4. IMNCI was identified as a key RMNCAH&N intervention during development of UHC Benefit Package of Pakistan.

Key lessons learnt at policy change level included the following:

- Policy change was dependent upon identifying and striking a balance between the driving (facilitators) and resisting forces (barriers) of policy process.
- Joint accountability framework with clear cut roles and responsibilities for government counterparts was critical to achieve the desired outcomes.
- Federal and provincial level coordination forums having participation of all federating units helped in building shared vision for child survival.
- During last two years of implementation, Covid-19 emerged as a big competing priority for health interventions diverting focus from childhood Pneumonia & Diarrhea.

4.2. Policy Translation

Project provided empirical and credible evidence to the policy makers and planners on the use of updated commodities for improved management of U5 Pneumonia and Diarrhea. All the governments updated their official documents and lists with updated commodities. The project catalyzed the initial stages of the commodities procurement process with policy makers and pharmaceutical manufacturers for local production and uninterrupted supply of updated commodities. In Punjab, public procurement could not be completed as minimum number of

required bidders was not there. In Sindh, updated commodities were procured and provided at majority of the facilities by the government. Updated IMNCI guidelines were used for building capacities of healthcare providers for improved management of U5 Pneumonia and Diarrhea. The project worked in close coordination with Pakistan Medical Association and Pakistan Pediatric Association to roll out the trainings in a cost-effective manner. While the progress on commodity security was achieved to certain extent, there are certain gaps that are still pending. One of the key activities that would require sustained advocacy was endorsement of pre-service IMNCI guidelines for its integration in undergraduate education of medical doctors, nurses and community health workers through Pakistan Medical Commission and Pakistan Nursing Council. During last two years of the project, advocacy activities were affected due to Covid-19 restriction in the country and limited in-person advocacy. Specific conclusions under this project outcome are as follows:

1. Procurement Lists of Provincial Health Departments were revised with updated commodities to manage childhood Pneumonia and Diarrhea.
2. Health information systems were updated to reflect the information on updated commodities.
3. Provincial government allocated budget for procurement beyond the support of the project.
4. Majority of the health facilities in the project areas had at least one of service provider trained on updated IMNCI guidelines.
5. Covid-19 pandemic affected the advocacy efforts due to social restrictions.

Key lessons learnt at policy translation level included the following:

- Credible evidence is essential for facilitating policy translation and building ownership of policy makers.
- Engagement of professional associations proved very successful in reaching healthcare providers.
- During Covid-19, online consultative process was adopted, however, face-to-face advocacy was imperative for policy advocacy, like updating IMNCI guidelines in the curriculum.

4.3. Policy Implementation

Availability of updated commodities improved at the health facilities. Although, majority of the project activities were concluded around the mid-term evaluation, updated commodities were present at the time of end-term evaluation – showing the sustenance of project efforts. At health facilities, commodity security for management of U5 Pneumonia and Diarrhea was one of the key outcomes of the project. Majority of the health facilities falling under the scope of the project had shown improvement in availability of updated commodities. These simple yet effective measures were critical for quality healthcare and when coupled with capacity building of the relevant staff, these brought improvement in child survival. Prescribing behaviors of the healthcare providers showed tremendous improvements with increased use of antibiotics in

management of U5 Pneumonia and use of Zn and ORS in U5 Diarrhea. In the communities, LHWs were trained and oriented on danger signs of Pneumonia and Diarrhea to refer sick kids to the health facilities. While prescribing behaviors changed to include antibiotics to treat U5 Pneumonia and Zn and ORS for U5 Diarrhea, prescription of DTs in public sector was dependent on its availability within facility stock and in private sector on preference of healthcare provider and its availability in open market. Despite various brands registered were by DRAP, there was little availability of Dispersible Tablets in the open market. Specific conclusions under policy implementation are as follows:

1. Availability of updated commodities improved in the public facilities.
2. Prescribing behaviors of healthcare providers to manage childhood Pneumonia and Diarrhea improved significantly at public facilities.
3. IMNCI training enhanced capacities of LHWs to identify danger sign for quick referral of sick kids to the health facilities.
4. Dispersible tablets were not available in open market, hampering its use by the private sector providers.
5. Gender differentials and possible discriminatory practices against girl child were not identified during the evaluation.

Key lessons learnt at policy implementation included the following:

- Prescribing behaviors of public sector providers were dependent on the availability of updated commodities in the health facilities.
- Community linkage through LHWs improved referral and case load of U5 Pneumonia and Diarrhea at the health facilities.
- Both pull and push factors must be crated to ensure local manufacturing of the updated commodities by the Pharma industry.

4.4. Knowledge Management

The project translated the child survival policies into actions and achieved outcomes that would require replication and scale up in other areas of the country for improving health outcomes. Through knowledge management, project learnings were also translated into all the federating units of the country. IMNCI guidelines updated through support of this project were available to all the federating units of Pakistan as it was endorsed and approved by the federal ministry. Specific conclusions included the following:

1. Development of UHC Benefit Packages of all provinces included updated commodities for management of childhood Pneumonia and Diarrhea.
2. Updated IMNCI guidelines were endorsed by all provinces and regions of Pakistan.
3. Professional associations involved in the roll-out of IMNCI trainings continued the activity in uncovered districts of Punjab.

Key lessons learnt at knowledge management included the following:

- Use of federal coordination forums was very effective in knowledge management of the project activities.
- Success of the interventions was found critical for its replication and scale up.

5. RECOMMENDATIONS

UNICEF P&D Project is leaving behind quite a legacy that government is taking up or has already institutionalized. Recommendations under end-term evaluation focuses on sustainability of project interventions while addressing emerging gaps in improving child survival in Pakistan. In order to implement these recommendations, a system strengthening approach would be required to fill gaps in services for U5 Pneumonia and Diarrhea and making interventions well entrenched in existing systems and structures for sustainability.

Process of developing these recommendations was based on the findings of the evaluation and inputs from all key stakeholders. While perspective of duty bearers was elicited through key informant interviews with government counterparts, healthcare providers and development partners, inputs from right holders of U5 Pneumonia and Diarrhea services were obtained through focus group discussions at the community level. Following a consultative approach, draft recommendations were shared with the members of the Evaluation Reference Group. Final recommendations included in this report were further refined based on their inputs. Description of key recommendations is followed by a matrix where each recommendation is further elaborated with description of proposed actions, priority, timelines and responsibility. Overall, the recommendations are divided into strategic and operational levels, as described in the following paragraphs.

5.1. Strategic Level

Recommendation 1: Promoting focus on child survival through advocacy and follow-up on national and international commitments – At the federal and provincial levels, sustained advocacy for policy translation is needed to improve availability, access and utilization of updated commodities. Linkages should be drawn between lives lost due to Pneumonia and Diarrhea and their effect on childhood morbidity and mortality. Role of media is also critical in sensitizing politicians and government. Government needs to play a proactive role to coordinate child survival policy with health and education policies, facilitating effective management of pneumonia and diarrhea. Federal coordination platform should be supported for advocacy and policy dialogues on child survival with gender integration to address gender inequities to access and utilization of healthcare services, ensuring every girl and boy child have equitable opportunities in health system. This forum also provides a platform for cross-sharing of challenges and lessons learnt from implementation of EPHS among the provinces. Specific actions include the following:

- Advocacy with top political leadership and civil bureaucracy for evidence-based increase in earmarked budget and long-term monitoring mechanism for childhood illnesses.
- Focusing relevant ministers to emphasize child survival across the line departments and sectoral policies.
- Inclusion of child survival in all relevant sectoral policies beyond health sector.
- Reaching out politicians during upcoming electoral process to put the emphatic focus on pneumonia and diarrhea in their political manifestos.

- Strengthening federal, provincial linkages and coordination through RMNCAH&N and provincial TWGs to implement National Health Vision, policies and health sector strategies.
- Conducting policy dialogues and roundtables for advocating implementation of UHC Benefit Package as well as achievement of SDGs, particularly 3.2.

Recommendation 2: Using evidence from P&D Project in future programming for child survival – While Pakistan has made steady improvements in U5 mortality, neonatal mortality is still alarmingly high. There is need to focus on neonatal deaths in future programming for implementation of high impact interventions. In order to strengthen accountability for achievements of targets, clear-cut responsibilities should be assigned at federal, provincial and district levels. At policy change level, essential medicines list and procurement lists should be updated to incorporate the new GAPPD recommendations. Specific actions for future programming include the following:

- Targeting interventions to improve gender equality and same time addressing the needs of marginalized beneficiaries, particularly for those suffering from disability or residing in rural areas and urban slums.
- Review and update child survival accountability framework for government ownership at all levels assigning responsibilities at federal, provincial and district levels.
- Exploring digital innovations for improving management of U5 Pneumonia and Diarrhea and progress tracking in line with National Digital Framework.
- Engaging media to sensitize politicians and government to focus on improving child survival in Pakistan.

Recommendation 3: Ensuring sustainability, scale-up and replication of the project activities – Good practices of the project should be replicated and scaled-up to other districts of Punjab as well as to uncovered provinces and regions of Pakistan. Utilizing federal coordination forum for sharing of success stories and lessons learnt with uncovered areas of the country will pave way for knowledge management within the country. For similar settings in rest of the developing world, results of the project should be broadly disseminated through publication in international journals. Specific actions under this recommendation are:

- Using federal coordination forum for evidence-based advocacy to enhance coverage to uncovered provinces and areas of Pakistan.
- Engaging intelligentsia for policy advocacy with relevant politicians and assembly members working on health and finance to keep pneumonia and diarrhea a high priority agenda.
- Donors to use their influence for sustaining focus on U5 Pneumonia and Diarrhea services and commodity security during their interactions with policy makers and planners.
- Follow-up with provincial governments for regular inclusion of updated commodities in their procurement lists and purchase orders.

- Sharing of project results, including challenges and lessons learnt, through national dissemination and peer-reviewed publication.

Recommendation 4: Engaging pharma industry for local manufacturing of updated commodities – Advocacy with pharma industry and distribution networks to facilitate local manufacturing of updated commodities for public procurement and supply in the open market. In order to sustain local manufacturing of P&D commodities, pricing mechanism should be rationalized in a way to keep the production viable for the pharma industry. Moreover, tendering for public sector procurement should be kept transparent and consistent to incentivize pharmaceuticals to continue manufacturing. Specific actions related to engagement of pharma industry include:

- Continued engagement with pharma industry to promote local production and widespread access through effective marketing in rural and other communities using their network.
- Rationalization of pricing mechanisms for viability of production.
- Exploring public private partnerships with pharma industry and GP networks for demand generation and manufacturing of updated commodities.

5.2. Operational Level

Recommendation 5: Strengthening information systems and district capacities for commodity security – Use of information for evidence-based decision making is crucial to improve commodities supply at health facilities. Inclusion of P&D commodities in DHIS has improved evidence generation. Similarly, digital transition from DHIS to DHIS2 needs to be pushed up on priority basis for real-time data. Efforts must be continued to integrate MISs and implementation of HLMIS for streamlining supply chain mechanism and commodity security. Specific actions include the following:

- Accelerating transition to DHIS2 for real-time data and its integration with prevailing digital information systems.
- Building analytical capacities of facility level staff and district managers on data systems and use of information.
- Implementation of standardized forecasting, procurement, distribution, maintenance and warehousing through institutionalizing HLMIS at district and facility levels.
- Including U5 Pneumonia and Diarrhea indicators in government's prioritized monitoring systems to improve decision making and ensure accountability.

Recommendation 6: Building staff capacities at health facilities and in communities – Revised and updated IMNCI guidelines for management of U5 Pneumonia and Diarrhea are part of the relevant action plans. Regulatory bodies like Healthcare Commissions are fully on-board to play their role in improving capacities of private sector providers. IMNCI may be made part of under graduate training curricula of medical education and should be integrated with other public health initiatives. In-service refresher courses must be planned for the healthcare providers. Online training modules (like Agora platform) may be adopted for strengthening staff capacity. It is

learnt that distance learning could be more efficient and cost effective in knowledge transfer. Simple protocols and manuals can be provided to care providers for their guidance using digital platform. Telemedicine hub may also be created to provide supportive supervision to care providers at the periphery for skilled service delivery. Specific actions for building staff capacities include the following:

- Advocacy with PMDC and medical universities to make treatment guidelines part of education and training curriculum.
- Testing and scale up of digital platforms for training and improving clinical practices.
- Continued medical education to be arranged for providers to enhance their capacities to manage U5 Pneumonia and Diarrhea.

Recommendation 7: Standardizing prescribing behaviors of healthcare providers – Both public and private sector providers should be targeted for bringing quality and uniformity in their prescribing behaviors as per IMNCI guidelines. This will also ensure equitable healthcare to girls and boys suffering from Pneumonia and Diarrhea. For capacity building of private practitioners, continued engagement with professional associations (E.g., PPA, PMA) would be beneficial. While prescribing behaviors are dependent on the availability of the commodity, specialists in tertiary care institutions should also be targeted in any future design, as they are known to be trend setters for junior practitioners in both public and private sectors. This will also help in building capacities of medical students and post-graduate trainees at tertiary care hospitals. Specific actions to standardize prescribing behaviors are as follows:

- Active involvement with professional medical associations for improving prescribing behaviors of private sector providers as per IMNCI guidelines.
- Advocacy with local managers and service providers for raising the need of updated P&D commodities in open market to influence prescribing behaviors.
- Improving prescribing behaviors through involvement of specialists in tertiary hospitals as trend setters for junior practitioners in both public and private sectors.

Recommendation 8: Enhancing community awareness on childhood illnesses – A structured mass awareness campaign on childhood illness of the community, should be initiated, with support of development partners, through print, electronic and social media. Specific actions to raise community awareness include the following:

- Use of print, electronic and social media to promote updated commodities for their ease of use, effectiveness and convenience.
- Targeting populations with high burden of U5 Pneumonia and Diarrhea to raise positive awareness while keeping in view socio-economic and gender inequalities.

All strategic and operational levels recommendations along with proposed actions, priority, timeline and responsibility are described in the following table.

Table 16: Recommendations Matrix based on End-Term Evaluation

SN	Recommendations	Actions	Priority	Timeline	Responsibility
Strategic Level					
1.	Promoting focus on child survival through advocacy and follow-up on national and international commitments	Advocacy with top political leadership and civil bureaucracy for evidence-based increase in earmarked budget and long-term monitoring mechanism for childhood illnesses	+++	Medium term	M/o NHR&C, DOHs and development partners
		Focusing relevant ministers to emphasize child survival across the line departments and sectoral policies	++	Medium term	M/o NHR&C, provincial DOHs and UNICEF
		Inclusion of child survival in all relevant sectoral policies beyond health sector	++	Long term	M/o NHR&C, provincial DOHs and UNICEF
		Reaching out politicians during upcoming electoral process to put the emphatic focus on pneumonia and diarrhea in their political manifestos	+++	Short term	M/o NHR&C and development partners
		Strengthening federal, provincial linkages and coordination through RMNCAH&N and provincial TWGs to implement National Health Vision, policies and sector strategies	++	Long term	Federal and provincial TWGs
		Conducting policy dialogues and roundtables for advocating implementation of UHC Benefit Package as well as achievement of SDGs, particularly 3.2	+++	Short term	M/o NHR&C, provincial DOHs and UNICEF
2.	Using evidence from P&D Project in future programming for child survival	Targeting interventions to improve gender equality and same time addressing needs of marginalized beneficiaries, particularly for those suffering from disability or residing in rural areas and urban slums	++	Medium term	M/o NHR&C and provincial DOHs
		Review and update child survival accountability framework for government ownership and assigning responsibilities at federal, provincial and district levels	+++	Short term	M/o NHR&C and provincial DOHs
		Exploring digital innovations for improving management of U5 Pneumonia and Diarrhea and progress tracking in line with National Digital Framework	++	Medium term	M/o NHR&C
		Engaging media to sensitize politicians and government to focus on improving child survival in Pakistan	+++	Medium term	UNICEF and development partners

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SN	Recommendations	Actions	Priority	Timeline	Responsibility
3.	Ensuring sustainability, scale-up and replication of the project activities	Using federal coordination forum for evidence-based advocacy to enhance coverage to uncovered provinces and areas	++	Medium term	M/o NHR&C and provincial DOHs
		Engaging intelligentsia for policy advocacy with relevant assembly members working on health and finance to keep pneumonia and diarrhea a high priority agenda	++	Medium term	M/o NHR&C and UNICEF
		Donors to use their influence for sustaining focus on U5 Pneumonia and Diarrhea services and commodity security during their interactions with policy makers and planners	++	Medium term	Donors and development partners
		Follow-up with provincial governments for regular inclusion of updated commodities in their procurement lists and purchase orders	+++	Short term	Provincial DOHs and UNICEF
		Sharing of project results, including challenges and lessons learnt, through national dissemination and peer-reviewed publication	++	Short term	M/o NHR&C, provincial DOHs and UNICEF
4.	Engaging pharma industry for local manufacturing of updated commodities	Continued engagement with pharma industry to promote local production and widespread access through effective marketing in rural and other communities using their network	++	Short term	Provincial DOHs and UNICEF
		Rationalization of pricing mechanisms for viability of production	++	Short term	M/o NHR&C and DRAP
		Exploring public private partnerships with pharma industry and GP networks for demand generation and manufacturing of updated commodities	++	Medium term	Provincial DOHs, PMA, PPA and Pharma network
Operational Level					
5.	Strengthening information systems and district capacities for commodity security	Accelerating transition to DHIS2 for real-time data and its integration with prevailing digital information systems	+++	Medium term	Provincial DOHs and UNICEF
		Building analytical capacities of facility level staff and district managers on data systems and use of information	++	Short term	Provincial DOHs
		Implementation of standardized forecasting, procurement, distribution, maintenance and warehousing through institutionalizing HLMIS at district and facility levels	++	Long term	Provincial DOHs and District Health Departments

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SN	Recommendations	Actions	Priority	Timeline	Responsibility
		Including U5 Pneumonia and Diarrhea indicators in government's prioritized monitoring systems to improve decision making and ensure accountability	++	Long term	M/o NHR&C and provincial DOHs
6.	Building staff capacities at health facilities and in communities	Advocacy with PMDC and medical universities to make treatment guidelines part of education and training curriculum	++	Long term	M/o NHR&C, UNICEF and medical universities
		Testing and scale up of digital platforms for training and improving clinical practices	+	Long term	M/o NHR&C and UNICEF
		Continued medical education to be arranged for providers to enhance their capacities to manage U5 P&D	++	Long term	Provincial DOHs and academia
7.	Standardizing prescribing behaviors of healthcare providers	Active involvement with professional medical associations for improving prescribing behaviors of private sector providers as per IMNCI guidelines	++	Medium term	Provincial DOHs, PMA and PPA
		Advocacy with local managers and service providers for raising the need of updated P&D commodities in open market to influence prescribing behaviors	++	Medium term	Provincial DOHs and UNICEF
		Improving prescribing behaviors through involvement of specialists in tertiary hospitals as trend setters for junior practitioners in public and private sectors	+	Long term	Provincial DOHs and tertiary hospitals
8.	Enhancing community awareness on childhood illnesses	Use of print, electronic and social media to promote updated commodities for their ease of use, effectiveness and convenience	+++	Long term	UNICEF and development partners
		Targeting populations with high burden to raise positive awareness while keeping in view socio-economic and gender inequalities	+++	Long term	Federal and provincial TWGs and media outlets

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7. ANNEXES

Annex 1: Terms of Reference of End-Term Evaluation

Requesting Section/Field Office: UNICEF Pakistan, Health and Social Policy Section
End Term Evaluation of Pneumonia and Diarrhea Project

- PROGRAMME AREA & SPECIFIC PROJECT INVOLVED:** Ensure Supply & logistics strategies contribute to the overall CO priorities and provide value addition to the Programme outputs **Health - Pneumonia and Diarrhea Project funded by BMGF, Outcome 4: Knowledge Management - Translation of lessons learned from this investment to other settings/broader geographical areas within Pakistan.**

(Specify programme area and project activity under the approved Work Plan)

- NATURE & PURPOSE OF CONSULTANCY:**

Study
 Documentation
 Facilitation
 Technical
 Evaluation
 Clerical/Secretarial
 Others

Context and Programme Description

Global and Pakistan Country Context

Pneumonia and diarrhea are the two leading infectious causes of death in children under the age of 5 worldwide, responsible for more than 1.5 million deaths annually. They accounted for 15% and 9%, respectively, of the 6.3 million under-five deaths that occurred globally in 2013. Most of the morbidity and mortality worldwide due to pneumonia occur in low- and middle-income countries (LMICs). Though second to pneumonia in mortality burden, diarrheal illnesses occur more frequently. Children in LMICs under the age of 5 suffer on average of 2.9 episodes per year of diarrhea, accounting for nearly 1.7 billion episodes of diarrhea yearly, resulting in over 578,000 deaths annually. Pneumonia and diarrheal disease share several risk factors, including malnutrition, poor hygiene, poor socioeconomic status, lower education status, and lack of breastfeeding. Despite the availability of effective cost-effective interventions to end preventable childhood deaths from diarrhea and pneumonia, access is low in many LMICs. There are many barriers to the implementation and scale-up of interventions to end preventable deaths in children from pneumonia and diarrhea. In 2013 WHO and United Nations Children’s Fund (UNICEF) launched Integrated Global Action Plan for the Prevention and Control of Pneumonia and Diarrhea (GAPPD) with a goal to eliminate child deaths from pneumonia and diarrhea by 2025. Community-based delivery platforms have been proposed to reach the poorest, hard to reach populations and reduce health care inequalities.¹

The total population of Pakistan is 213.7 million (including Azad Jammu & Kashmir (AJK)). Pakistan has the third highest burden of maternal, foetal, and child mortality in the world. According to

Pakistan Demographic and Health Survey (PDHS) 2017-18, under-5 mortality was 74 deaths per 1,000 live births. These rates imply that nearly one in 16 children die before reaching their first birthday and one in 14 dies before reaching their fifth birthday. And one of the major preventive killers of under five children in country is childhood pneumonia and diarrhoea. 14% of children suffered from acute respiratory infections (ARI), and ARIs leading to pneumonia kills more children under the age of 5 than any other infectious disease in Pakistan. Around 84% of children who were taken for treatment and advice had acute respiratory infection. 51% sought treatment on the same or next day, and 46% were given antibiotics as treatment meaning only half of children suffering from pneumonia receive an appropriate antibiotic. Similarly, prevalence of diarrhea among children under the age of five is 9%. Only 37% of children suffering from diarrhoea are appropriately treated with Oral Rehydration Solution (ORS) and only 8% receive zinc appropriately.²

Object of Evaluation - Pneumonia and Diarrhoea Project - “Accelerating policy change, translation and implementation for pneumonia and diarrhoea commodities”

- **Overall goal, outcomes and UNICEF contribution**

The overarching goals of the “Accelerating Policy Change, Translation and Implementation for Pneumonia and Diarrhea Commodities in Pakistan” program, funded by the Bill & Melinda Gates Foundation (BMGF), was to ensure that relevant national policies are in place, understood, and adhered to in order to ensure availability of the essential commodities for improving management of childhood diarrhea and pneumonia and increasing child survival by the end of 2021.

The primary outcomes to be achieved through the program included the following:

- Outcome 1: Policy Change - Existing national/provincial policies and guidelines are updated in line with global recommendations (WHO/GAPD) for management of diarrhea and pneumonia among under five children in Pakistan by the end of 2021.
- Outcome 2: Policy Translation - Translation of revised and updated pneumonia and diarrhea treatment guidelines into relevant action plans by all provincial/areas health departments in Pakistan by the end of 2021.
- Outcome 3: Policy Implementation - Availability of essential commodities (amoxicillin DT, zinc DT, co-packaged ORS and zinc, oxygen, ARI timers, and pulse oximeters) for treatment of childhood pneumonia and diarrhea in Pakistan by the end of 2021.
- Outcome 4: Knowledge Management - Translation of lessons learned from this investment to other settings/broader geographical areas within Pakistan.

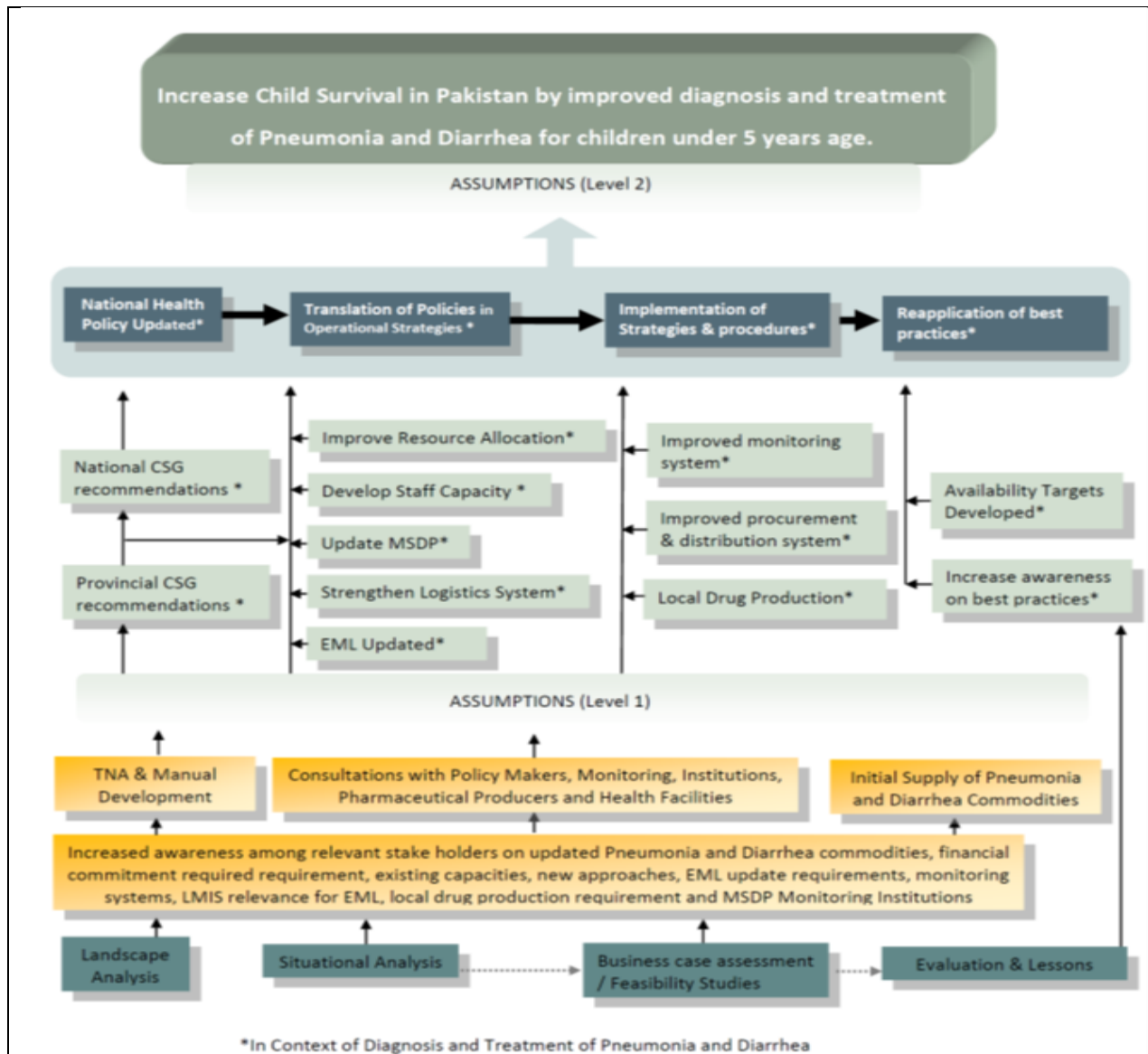
UNICEF contribution was to: 1) support improvement of relevant policies and guidelines at the national, provincial, and area levels, with a focus on incorporating pneumonia and diarrhea management commodities into the essential medicine list, identifying key domestic resource mobilization stakeholders (e.g. public sector financing opportunities, other donors and government, etc.) for outreach, and establishing a national coordination mechanism; 2) utilize revised guidelines to develop new training materials (such as IMNCI) for Health Care Providers and Lady Health Workers, 3) advocate for increased resource allocation for commodities; and 4) catalyze the process of commodities procurement with government leaders and pharmaceutical manufacturing stakeholders, while updating supply chain and logistics management systems to track the respective commodities in the target provinces of Sindh and

Punjab. To further supplement the planned work of the investment, commodity availability targets were developed to determine its success, and results were meant to be documented and disseminated as learnings for complementary in-country initiatives and long-term sustainability.

The program objectives were aligned with UNICEF Country Program strategic health priorities (2012-2018 and 2018-2022), which aimed to link the most disadvantaged children and women with an integrated package of high-impact and high-quality healthcare commodities, with a special focus on system strengthening and ensuring a continuum of healthcare. These outcomes were consistent with the One UN Program framework and national and provincial priorities for maternal, newborn, and child health (MNCH).

- **Theory of change**

Soon after the inception of the program, an 'Evaluability Study' was conducted and 'Landscape Analysis' was undertaken, which helped to develop a Theory of Change retrospectively pertaining to "Accelerating policy change, translation and implementation for pneumonia and diarrhoea commodities" program has been presented with the following diagram.



- **Implementation timeline**

The program started in 2016 and was meant to finish at the end of July 2021. It has been extended until December 2021 because of delays in implementation due to the COVID-19. However, the programme achieved most of the key programme activities in 2019 and early 2020.³

Stakeholders

A range of stakeholders at different levels participated, benefited or contributed to the program:

- *Federal:* Ministry of National Health Services Regulations & Coordination, and nominated members of established technical working groups like National RMNCAH TWG

³ The project ended in July 2019 and is now on no cost extension mode till December 2021.

- *Provincial:* Departments of Health, Lady Health Worker Programme, Integrated Reproductive Maternal Neonatal Child Health and Nutrition Program, MIS unit/program, MNCH program, provincial CSW members, IMNCI TWG members and Professional bodies like Pakistan pediatric association and Pakistan medical association.
- *District:* District Health Offices, Health providers, Lady Health Supervisors (LHSs) and Lady Health Workers (LHWs).
- *Community:* Concerned population (women and children) of the catchment areas as designated by government and beneficiaries of services.
- *Development partners:* Aga Khan University, USAID, USF, INGOs, WHO, BMGF.

UNICEF has been the main implementing partner directly providing technical assistance to the government at national and provincial level for policy change and translation. All relevant government departments were involved at the federal, provincial and district level.

- **Evidence from previous evaluation**

A mid-term evaluation of the program was carried out in 2019, the summary conclusions and recommendations are provided below.⁴

In the causal pathway of policy transformation and reforms, the stage of policy implementation is the most critical. In order to make the P&D Project interventions institutionalized in the existing system, the strengthening of the health sector at individual, organizational and systems level is of utmost importance. A system strengthening approach is recommended while moving forward so that the interventions under P&D become well entrenched in existing systems for sustainability beyond the project life.

Enabling policy environment – Sustenance of federal-provincial-district linkages and coordination should be continued through existing platforms at federal level (RMNCAH Group), provincial level (CSG and TWG), and district level (District Health & Population Management Teams). The supply chain management (from DOH to health facilities and outreach) should be strengthened so as the government capacity to roll out LMIS and DHIS-02.

Private sector engagement – Being a service provider of more than two-thirds of population, the project should establish wider and proactive public-private partnership models. This includes engagement with pharma industry along with Drugs Regulatory Authority of Pakistan, institutions regulating medical, nursing and paramedical education, and professional associations.

Advocacy and Communication – Concerted advocacy efforts with political leadership for sustained will and commitment is important in policy transformation and reforms. Side by side, continued networking and lobbying with pharmaceutical manufacturers for local production is very important. The project should engage relevant partners for leveraging resources and coordinated actions.

Scaling up and replication – Despite the devolution of health sector, which in a way made it easy to implement policy transformations in individual provinces, the project is encouraged to scale up the interventions to cover entire Pakistan. Now, after having experience of implementation in two

⁴ The evaluation report can be consulted at [UNICEF Evaluation Report Database](#).

of the big provinces of Pakistan, the provincial level interventions will be built upon the lessons learnt for replication through cross-sharing of achievements, challenges and lessons learnt among uncovered regions and provinces of Pakistan.

Purpose, Objectives and Scope of the evaluation

Purpose of the evaluation

End of project evaluation is part of the monitoring and evaluation activities planned for this project to ascertain the progress made as per the recommendations of mid-term evaluation of the project and was successful in achieving the desired results. Although with COVID 19 emergency and shift of priorities within country as well as limited opportunities in 2020 and 2021, UNICEF believes that the project successfully achieved the planned targets during the tenure.

This evaluation will document the overall progress and lessons learned from the project that will be used in improving health programming in accordance with the National Health Vision, and Universal Health Coverage Benefit Package (UHC BP) strategic focus, as well as support in laying out an exit strategy for future programming. The evidences will also help in scaling up to other geographical areas and settings in Pakistan.

Government health institutions (more specifically the M/o NHR&C and the Provincial/Area Departments of Health, LHWP, IRMNCH program), UNICEF, US Fund, BMGF and AKU will be the primary intended users of this evaluation, and benefit from the learning relevant to their work. Women, children, families, communities, health care providers, policy makers, opinion leaders and partners would be the secondary audience, who can benefit from the learning and findings of this evaluation.

Objectives of the evaluation

Objectives of the end-term evaluation of the project for 'Accelerating Policy Change, Translation and Implementation for Pneumonia and Diarrhea Commodities in Pakistan (Called the Project or P&D Project), is to assess the extent to which the project was successful in achieving its intended results and aided the beneficiaries, and whether the stakeholders were productively involved in the causal chain of policy change, policy translation, policy implementation and knowledge management. And to further explore the opportunities and lessons learned keeping in context mid-term evaluation results and recommendations, which UNICEF and implementing partners will use to inform existing and future programming. The evaluation should answer the following five evaluation objectives:

- To assess the extent to which the intended outcomes of the project are achieved by comparing it with the results from the baseline studies/evaluability assessment of the project and midterm evaluation results/conclusions/recommendations;
- To document the processes involved in achievement of the outcomes and identify gaps that has affected the project to ensure achieving desired results;
- To review and assess proper utilization of supplies provided to beneficiaries at public facilities and identify the gaps in utilization; if any;
- To assess the potential for replicability and scalability;

- To provide guidance for improvement and course correction in all areas and program strategies, and targets to ensure effective achievement of the results and;
- Document the end project recommendations for the follow up under Universal Health Coverage - essential health service package.

Scope of the evaluation

It will take into account the baseline evaluability assessment done at the inception of the project and also mid-term evaluation findings and recommendations to collect lessons and recommendations for future health programming and advocacy for improved performance and in order to improve the overall child health within country. The following scope of work must be covered by the evaluation team:

- Clarity of programme concept, design, goals and objectives and implementation priorities;
- Effectiveness of the service-delivery approach and determine, as systematically and objectively as possible, the progress towards specified project objectives and the extent to which they are achieved and contributed to increase child survival in Pakistan, This requires an careful analysis to improve the diagnosis and treatment of pneumonia and diarrhea in children under 5 years of age over the project period, keeping in perspective pre and post COVID context in project evaluation results respectively(in light of the agreed Theory of change at the onset of the project – mentioned above).
- To describe the progress and achievements of project in relation to:
 - ✓ the agreed results with specific emphasis on the improvement of policies and guidelines at the national, provincial, and area levels;
 - ✓ identifying key domestic resource mobilization stakeholders for outreach and establishing a national coordination mechanism;
 - ✓ revised guidelines to develop new training materials for Health Care Providers and Lady Health Workers and their role in resource allocation for commodities, catalyze the initial stages of the commodities procurement process with government leaders and pharmaceutical manufacturing stakeholders;
 - ✓ capture changes in the supply chain and logistics management systems to track the respective commodities in the target provinces and national health sector’s strategic plans as well as the UHC framework.
- The efficacy of project structure and systems to manage with regards to coordination, supervision, results reporting, financial management, procurement of supplies and monitoring and evaluation.
- Gender and equity approaches in design and implementation of the programme;
- Adequacy and effectiveness of programme indicators with regards to monitoring the performance of the programme.

Based on the above information, the consultants should provide inputs on the way forward to enhance future relevance and performance. The Evaluation is expected to give concrete and realistic recommendations with regards to future directions and effective management of the programme for informed decision making at all levels of health service delivery.

The Pneumonia and Diarrhea Project with BMGF support should be assessed against the OECD/DAC criteria of evaluation for the period 2016-2021. The evaluation team will be expected to use the OECD/DAC criteria comprehensively and must propose suitable methods to review the criteria accordingly. However, they are expected to compare and review with the available baselines and mid-term evaluation of the project. A robust, innovative and high-quality evaluation design is expected to be provided by the evaluation team to adequately address the data gaps and other challenges expected around the evaluation.

- **Geographical Scope of the Programme**

The evaluation will review the performance of the project in both the target Provinces, i.e., Punjab (in 5 districts) and all 30 districts of Sindh. Programme activities were implemented at relevant national, provincial and local level. The programme covered two provinces: Punjab and Sindh. Within these provinces, respectively 5 marginalized districts in Punjab [Southern Part] and all 29 districts of Sindh were directly supported by the programme. The districts of Punjab are Pakpattan, Bahawalnagar, Rahimyar Khan, Muzaffargarh and Dera Ghazi Khan.

Evaluation criteria and questions

The Pneumonia and Diarrhoea Project with BMGF support should be assessed against the OECD/DAC criteria of evaluation for the period 2016-2021. The evaluation team will be expected to use the OECD/DAC criteria comprehensively and must propose suitable methods to review the criteria accordingly. However, they are expected to compare and review with the available baselines and mid-term evaluation of the project. A robust, innovative and high-quality evaluation design is expected to be provided by the evaluation team to adequately address the data gaps and other challenges expected around the evaluation.

Relevance

- How relevant and meaningful were the project objectives and activities as per the agreed outlined outcomes of policy change, policy translation and policy implementation in addressing the needs and priorities of the marginalized and vulnerable children in the project areas?
- Whether the mechanisms available to create awareness among communities were effectively linked to the project objectives?
- What was the relevancy of the project with the Federal and provincial Departments of Health, as well as the services being provided by the private sector?
- To what extent the objectives of the project were consistent with the existing national/provincial policies and guidelines (particularly Pakistan government recently endorsed UHC BP) in line with global recommendations (WHO/GAPPD) for management of Diarrhea and Pneumonia among under five children in Pakistan and are sustainable?
- Whether the project has been able to well adapt to the changing context and remain relevant, particularly related to Covid-19.

Coherence

- Were the strategies or approaches realistic, appropriate, and adequate to achieve its desired goal and results?
- To what extent UNICEF's project interventions complement those implemented by the government?
- To what extent were external factors (political stability/instability, population movements, emergency context etc.) considered in the design and delivery of the intervention?
- To what extent was the intervention design and delivery overall in line with international standards and principles?

Effectiveness

- To what extent the project has achieved its objectives/outcomes and what were the major factors influencing the achievement or non-achievement of the objectives/outcomes especially keeping in COVID pandemic crisis context from mid-term project evaluation onwards?
- To what extent the implementation of the project approaches worked as intended, particularly after the baseline in 2016 and COVID pandemic emergency crisis in country after early 2020 onwards and subsequent adjustments?
- How effectively various Federal and Provincial departments of health and programs coordinated among each other?
- Whether the health care providers and community health workers have the required knowledge and skills to appropriately utilize the supplies as per WHO/UNICEF recommended standards?
- Whether monitoring and reporting mechanisms exists and effectively implemented for effective tracking of desired results and improvement in decision making and system?
- How effective are the 'innovative approaches like use of ARI Timers and Pulse Oximeters, and using social media for reaching out to sensitize primary and secondary beneficiaries to advocate and raise awareness on prevention management and treatment of childhood Pneumonia and diarrhea and what results were achieved, are replicable within the Sindh/Punjab context and to scale up to other geographic areas?

Efficiency

- How well the resources, both human and financial, have been managed to ensure timely, cost-effective and efficient attainment of results? To what extent costs incurred can be justified by the results achieved?
- To what extent planning, budgeting, monitoring and evaluation, supervision, coordination, logistics and financial management systems are functioning in support of the project objectives?
- What are the implementation challenges from the perspective of both right holders and duty bearers especially for the under-five marginalized children of communities?
- To what extent has the project leveraged additional resources to address identified gaps and scale up the best practices to other geographic areas through project technical expertise
- What is the value added in terms of number of lives saved and morbidity reduced?

- What actions including innovations are needed to improve the coverage to scale up to other geographic areas in country through evidence-based decision making?
- Whether the availability of P&D supplies was cost-effective and is doable (keeping in current COVID context scenario as well)?

Impact (Long-term Outcomes)

- To what extent has the project achieved its goals in enhancing the health outcomes especially of under five children in the catchment communities in Sindh and Punjab target districts?
- To what extent the programme has been able to contribute to ownership and leadership of the Federal, provincial/area DOHs and inform evidence-based decision making or factors/challenges in influencing the achievement or non-achievement of outcomes?
- To what extent the programme learned and evolved over the 6 years and whether there were other alternatives, more cost-effective strategies available to reach intended results?

Sustainability

- What evidences exists to see the likelihood of the project results are sustained and will be adopted by the Government to ensure that the goal of the programme is achieved?
- What internal/external factors and drivers contribute to or constrain the sustainability of the project?
- What is being planned to sustain the process with government support beyond 2021?
- What is required to ensure prospects of sustainability of the project outcomes and the potential for replication or scale up of good practices and/or innovative approaches?

Cross Cutting Areas (Gender, Equity, Human Rights)

- To what extent the cross-cutting issues such as gender, equity, based approaches were considered at various levels of planning and implementation?
- Are the services provided gender responsive and was a gender and human rights-based approach considered during implementation?
- To what extent the process of managing and mitigating risks within project (including internal and external processes) was achieved?
- What have been the key lessons and experience of HCPs, Lady Health Workers and Lady Health Supervisors as agents of change and their contributions to other sectors?

Evaluation Methodology

- The evaluation team, in consultation with all key stakeholders mentioned above, will propose a robust methodology by using mixed methods (quantitative and qualitative approaches) to undertake a high quality, participatory, equity focused and gender responsive evaluation. The quantitative aspect will be covered by secondary data analysis (UNICEF's routine monitoring data, project reports, training data, P&D supplies data, literature review, National standard treatment etc.). Qualitative aspect can be covered

by key informant interviews at national and subnational levels with health managers, health service providers, LHWs and LHSs, and FGDs at provincial and district level, and caregiver interviews. A well-crafted methodology would address all areas of the programme with a thorough review of documentations.

- The evaluators should provide a comprehensive evaluation matrix with details of evaluation questions and indicators/assessment criteria, data collection sources and methods such as focus group discussion, interviews, KIIs etc., sample size and selection and related field work, as relevant. The evaluation team will review programme specific and related documents, reports (project documents/assessment report), reviews and other relevant information. It will convene a series of meetings with different tiers of national, provincial and district officials, donors, UN agencies, health service providers, LHS & LHWs, beneficiaries and other stakeholders to discuss key issues, challenges and strategic options for future.
- The evaluation team will be required to prepare and share a draft inception report with UNICEF for review detailing covering evaluation purpose, objective, evaluation design, methodology (quantitative and qualitative) methods of data collection, data collection tools, sampling strategy and sample size for each category of evaluation participants, detailed work plan, duration, roles and responsibilities of team members, field plan and risk mitigation plan. A plan of action will add value mapping all results against the key questions administered in the evaluation, their methodology, tools and target groups.
- The evaluation report should include a comprehensive quantitative and qualitative analysis of strengths, weaknesses, achievements, constraints, value for money and lessons learnt during implementation and recommendations to improve performance in future. Some of the qualitative aspects of the project should be produced in a separate report, containing case studies on different aspects of the Programme. The consultants will draft a report for comments of the Evaluation Reference Group. Then a final evaluation report addressing all comments should be submitted within a month to UNICEF for approval.

Presentation of data and report

In preparing the results of the evaluation, the findings will be evidence-based and have clear references to respective sources. The structure and quality of the evaluation report must adhere to UNICEF/UNEG quality standards in producing a clear, succinct, high quality and user-friendly evaluation report reflecting comments received from various reviewers, and stakeholders, with different chapters for provinces/areas; and presentations to share findings with stakeholders as per agreed schedule. The evaluation report may include the following report structure:

- Title page
- Table of contents
- Executive Summary, including the purpose of the evaluation, key findings, conclusions and recommendations in priority order (3-4 pages)
- Context including the overall country context on health

- Background of the project - including the object of the evaluation, Theory of Change, key stakeholders and major achievements mentioned in donor/progress reports
- Evaluation Purpose, objectives and scope
- Evaluation methodology, including evaluation criteria and questions, evaluation design and methods, sampling, integration of cross-cutting areas in the design (e.g., gender), ethics, and methodological limitations and mitigation strategies
- Findings per DAC criteria and evaluation questions (both quantitative and qualitative aspects) and presentation of rigorous data analysis. This also includes generating correlations to provide substantial evidence to the findings. A matrix explaining target vs achievement of the agreed project indicators; will add value if outcomes are weighted as X out of X.
- Conclusions, lessons learned and recommendations explicitly linked to the findings
- Annexes: terms of reference, list of indicators, evaluation matrix, evaluation tools, list of interviewees, table of sample size, and sample site as appropriate, field work plan, roles and responsibilities of the team, consent form and other relevant aspects.

The report should be provided in both hard copy and electronic version in English in the required UNICEF format. The final report should follow the [UNICEF Evaluation Report Standards](#) and will be reported on UNICEF's global reporting system known as [GEROS](#). The selected evaluation team will receive these guidelines at the first meeting following issuance of the contract.

Risks and Challenges

The evaluation proposal should provide information on how the team foresees numerous potential risks and constraints/challenges, which may affect the evaluation and accordingly mitigation measures should also be provided to ensure a robust evaluation process and outcome e.g., data quality, consistency and others. Risks such as timelines, which can be major risk and security risks, should also be considered.

Evaluation Ethics

The evaluation team will maintain standard ethical considerations, including informed consent, research conduct and confidentiality standards applied to the entire data collection process, covering UNEG ethical guidelines³. **UNICEF PROCEDURE ON ETHICAL STANDARDS IN RESEARCH, EVALUATION, DATA COLLECTION AND ANALYSIS (2021)** will be strictly observed by the evaluation team. These standards should be applied to the entire process of evaluation, including training of the evaluation field teams, mandatory written informed consent forms from the respondents to ensure complete anonymity and confidentiality throughout the evaluation process.

All the documents, including data collection tools, entry and analysis, and all the data developed or collected for this evaluation /consultancy are the intellectual property of the UNICEF. The Evaluation team members may not publish or disseminate the Evaluation Report, data collection tools, collected data or any other documents produced from this consultancy without the express permission of, and acknowledgement of UNICEF Pakistan.

Evaluation Management and Logistics

Evaluation Reference Group

The Ministry will notify Evaluation Reference Group (ERG) members, who will have the following responsibilities:

- Review the key deliverables of the evaluation, including the inception report, evaluation plan and final reports.
- Review plans for the data collection, instruments and tools as required and if needed.
- Provide timely feedback on draft reports, including comments from peer reviewers to the service provider or through any appropriate means as mutually agreed.
- Providing advice and facilitating access to information/stakeholders
- Recommend approval/rejection of specific recommendations emerging from the report and provide management response.
- Develop minutes of the meeting including all relevant decisions.

PCO-Social policy unit and Health:

Social Policy (Evaluation and Research) Section will lead the evaluation process and all its quality assurance of key deliverables. Chief of Health and his team in Islamabad will provide all coordination support and will be responsible for contract management with Supply Section. Health team will also provide key documents, contact points and arrange meetings with government and other counterparts in Islamabad or other provinces. They will ensure smooth coordination of activities throughout the evaluation process.

Field Office:

UNICEF Field Office PME&SP Specialists will support Social policy unit Islamabad, as requested. The Health Specialists in all provinces will support the Health Section and serve as the primary contact persons with the evaluation team. They will provide the documents, necessary technical guidance and logistic support and serve as a link with PCO.

Regional Office:

The Regional Office will be invited to peer review the ToRs and draft deliverables.

Evaluation team roles/responsibilities

The evaluation team should be composed of a team leader and a team of evaluators to assist him/her in the entire process of evaluation. Team leader will be responsible for the overall oversight of evaluation and quality issues, while the team of evaluators shall assist the team leader in carrying out the assignment, including, but not limited to facilitating logistics, meetings, interviews with stakeholders and identifying/accessing relevant data sources. Based on detailed roles and responsibilities, as will be mutually agreed and approved by the Approving Authority, detailed responsibilities of both parties will be further elucidated once selection is made.

The selected evaluation team will be responsible for all aspects of the evaluation, including selection of enumerators, designing and refining the sampling strategy, adapting and designing data collection tools, coordinating data collection in the field (including trainings for data collection team), ensuring quality of data, including managing data collection team and proper

administration of the evaluation tools, data entry, and analyzing quantitative and qualitative data. The evaluation team will also be responsible for all logistics, including field movements, local accommodation, vehicles, security, etc. However, field visits and data-collection will be facilitated by focal persons from the provincial health departments, LHWP/IRMNCH programme, and UNICEF programme staff in the provinces. Social policy unit will also assure the quality of field work through field observations.

The above-mentioned focal persons will also help the evaluation team to organize interaction with district stakeholders, including local communities and will extend all reasonable support necessary to facilitate activities are uninterrupted, including the provision of all key documents, clear and unambiguous details of target communities with relevant stakeholders. Throughout the delivery of field activities, the evaluation team will remain in constant communication with UNICEF Supervisor and nominated focal persons, as identified in due course. They will ensure providing UNICEF Supervisor with the progress of the evaluation against the Gantt Chart to be proposed in the inception report.

Proposal Development Procedures and logistics

The proposal should demonstrate a mixed team by gender with solid and relevant experience in both high-quality evaluations and related sectors (Health, Immunization and Nutrition).

The evaluator/evaluation firm will determine the logistics support required to execute the assignment. The requirements should be briefly outlined in the inception report and agreed to by UNICEF for inclusion in entitlements payable. UNICEF will hire the evaluation team as per its standard business procedures. All logistic support to the firm/organization will be covered by the institution under the leadership of UNICEF evaluation management team.

3. WORK ASSIGNMENTS, DELIVERABLES & PAYMENT SCHEDULE:

TASK TO BE PERFORMED <i>(Indicate expected work to be performed.)</i>	DELIVERABLE(s) <i>(Specify final outputs.)</i>	WORK SCHEDULE <i>(month/period covered)</i>	TERMS OF PAYMENT <i>(no more than 30% advance/ final payment no less than 10%)</i>
Inception phase including the following tasks: <ul style="list-style-type: none"> ● Desk review of all key documents ● Preparatory meetings with relevant UNICEF staff, stakeholders to develop a deeper understanding of the project components, 	Deliverable On (D1): <ul style="list-style-type: none"> ● Draft inception report (as per UNICEF standards) submitted for review detailing evaluation design, methodology (quantitative and qualitative methods; qualitative tools and guides, sample size of each category of interviewees; selection process and sampling technique; data collection 	06 weeks	25 % on Final submission of the inception report

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<p>implementation approaches, activities and guidance on the assignment</p> <ul style="list-style-type: none"> ● Design of quantitative and qualitative methodology, tools and field plan 	<p>strategy (work plan, duration, roles and responsibilities of team members (as against number of days per activity), field plan and risk mitigation plan, shared with UNICEF</p> <ul style="list-style-type: none"> ● Feedback received from the Evaluation Reference Group. Final inception report submitted to and endorsed by Social Policy. 		
<p>Field work phase including:</p> <ul style="list-style-type: none"> ● Pilot test of the data collection tools ● Field data collection, ● data entry and data cleaning 	<p>Deliverable Two (D2):</p> <ul style="list-style-type: none"> ● Quantitative and qualitative field work completed 	8 weeks	15% upon completion of field work
<p>Data Analysis Phase:</p> <ul style="list-style-type: none"> ● Preliminary data analysis ● Sharing preliminary findings UNICEF and other stakeholders 	<p>Deliverable Three (D3):</p> <ul style="list-style-type: none"> ● Data verification, cleaning and validation completed ● Preliminary findings shared 	4 weeks	10% upon completion of field sharing of preliminary findings
<p>Report Writing and Finalization Phase:</p> <ul style="list-style-type: none"> ● Develop draft report on an agreed format ● Seek comments from all stakeholders involved ● Incorporate comments in the evaluation report adhering to UNICEF/UNEG quality standards ● Debriefing to UNICEF team and relevant stakeholders with PPT presentation ● Develop policy brief 	<p>Deliverable Four (D4):</p> <ul style="list-style-type: none"> ● A comprehensive draft report as agreed with UNICEF. ● Final evaluation report submitted and reviewed by UNICEF and all stakeholders, endorsed by Social Policy. ● PPT presentation of draft report to relevant stakeholders ● Dissemination session to present findings and lessons to all key stakeholders and wider audience <p>Deliverable Five (D5):</p> <ul style="list-style-type: none"> ● Policy brief 	<p>04 weeks</p> <p>01 week</p> <p>02 weeks</p>	<p>30 % on submission of first draft of the final report</p> <p>10 % on clean final report submission</p> <p>10 % on final submission</p>

4. TOR FOR STUDIES AND EVALUATIONS REVIEWED AND ENDORSED BY THE PROGRAMME MONITORING, EVALUATION AND RESULT (PMER) SPECIALIST: *(Please tick)* Yes No

In addition, a Bachelor's degree of Medicine and Surgery is desirable.

8. TECHNICAL EVALUATION CRITERIA AND WEIGHT ALLOCATION BETWEEN TECHNICAL AND PRICE PROPOSAL

The evaluation procedure will focus on both technical and financial suitability. The weights of 70% and 30% shall be applied for technical and financial compliance respectively. Only firms scoring at least 70% of the maximum score during technical evaluation will be considered for financial evaluation.

8.1 Technical Proposal (70%): Tender should be structured as per given details:

- The criteria for evaluation shall include:

CATEGORY	MAXIMUM POINTS
Technical Evaluation	
1. Organizational Profile:	(15)
1.1. A reputable consultancy firm/ organization with a minimum of 5 years of similar experience for the provision (design and implementation) of evaluations. Previous experience of working with the UN and/or any other international organization is desirable.	5
1.2. The firm / organization have the experience of working with the government. They should be familiar with various provincial contexts. They should have regional/provincial teams on board who have ability to work effectively in all parts of the country, with enumerators who have the appropriate experience and language proficiency required to conduct the field work.	5
1.3. Samples of previous evaluations (reports etc.) and clearly identify and provide CVs for all those proposed as part of the team, clearly stating their roles and responsibilities.	5
2. Proposed Approach and Methodology:	(40)
2.1. Proposed methodology with details of evaluation approach and methods, sampling, strategies and evaluation design matrix with evaluation questions as per UNEG criteria, indicators and methods	20
2.2. Detailed realistic work plan for the tasks as per the ToR	05
2.3. Implementation strategies	05
2.4. Quality control mechanisms	05
2.5. Compliance to ethical standards	05
3. Team Profile:	(15)
3.1. The team lead has Masters or PhD level in development studies/social sciences/ Public Health from a reputed university.	05
3.2. The team lead has proven experience (at least 10 years) in designing, managing and conducting large-scale and complex evaluation, baseline and end-line studies, surveys and research studies in challenging project environments; experience of designing and conducting evaluations using qualitative and quantitative strategies/ techniques and ability to manage data and information systems	05
3.3. The team include sets of skills and expertise required to design, plan and conduct high quality evaluations (formative and summative, performance and impact) using quantitative and qualitative research methods.	05

TOTAL TECHNICAL SCORES	70
<i>Minimum technical required scores</i>	49
Financial Evaluation (<i>Programme to revise the Financial Response Template if Applicable</i>)	
3. PRICE (use the attached template and all cost should be accompanied with narrative indicating the costing modality, risks and mitigation measures. The quote should be without GST. If GST is applicable, it should be indicated as separate budget line.)	(30)
TOTAL MARKS	(100)

Financial Proposal (30 points):

Tender should be structured as per given UNICEF Pakistan Supply Section template.

9. SUPERVISION:

Name of Supervisor: Research and Evaluation Specialist, Social Policy Section Islamabad (with coordination support from the Health Programme Health Specialist, UNICEF Country Office and provincial offices).

Type of Supervision that will be provided (*Please be as clear as possible.*)

Close supervision for quality assurance of the evaluation process, reviews of deliverables, provision of detailed feedback and comments on various deliverables. UNICEF PMU team will support the Supervisor through provision of guiding documents, reviews of deliverables, provision of detailed feedback and comments on various deliverables. The health focal will support in providing all key documents, contact details of key stakeholders and ensure smooth coordination of evaluation activities

Annex to TOR

Standard Financial Response Template

Personnel Cost					
Name	Position	Rate/Unit	Qty	Total in (USD/PKR)	Remarks
Travel and Meeting Cost					
Item	Description	Rate/Unit	Qty	Total in (USD/PKR)	Remarks
Operation Cost					
Item	Description	Rate/Unit	Qty	Total in (USD/PKR)	Remarks
Direct					
Indirect/Management Fee					
Total					

Annex. II

Proposed Evaluation Matrix

The evaluation team is expected to prepare an evaluation matrix to be included in the inception report. As an example, a couple of criteria and questions are shown below to help the evaluation team prepared the entire matrix for all questions and UNEG criteria in consultation with UNICEF and partners.

<i>Key Evaluation Questions</i>	<i>Sub Evaluation Questions</i>	Indicators assessment criteria	/	Data collection and Source methods	Sample	Data analysis methods

Annex 2: Evaluation Matrix

DAC Criteria	Evaluation Questions	Evaluation Sub-Questions	Indicators / Assessment Criteria	Data Collection Sources and Methods	Sample ⁵	Data Analysis Method
Relevance	To what extent the project is suited to the priorities and policies of the target group, recipient and donor and whether the activities and outputs of the programme consistent with the overall goal and the attainment of its objectives?	1. How relevant and meaningful were the project objectives and activities as per the agreed outlined outcomes of policy change, policy translation and policy implementation in addressing the needs and priorities of the marginalized and vulnerable children in the project areas?	<p>Linkage of project activities with anticipated project outcomes</p> <p>Evidence supporting:</p> <ul style="list-style-type: none"> Updating of existing national/DHIS provincial policies and guidelines Development of relevant action plans based on revised and updated pneumonia and diarrhea treatment guidelines by all provinces Availability and use of updated commodities (amoxicillin DT, zinc DT, co-packaged ORS and zinc, oxygen, ARI timers, and pulse oximeters) for management of Pneumonia and Diarrhea in girls and boys Relevance of needs and priorities of the beneficiaries, including caregivers of marginalized and vulnerable children, with project activities 	<p>Primary</p> <p>KIs with M/o NHR&C representative</p> <p>KIs with provincial government representatives</p> <p>KIs with project staff</p> <p>KIs with development partners' representatives</p> <p>FGDs with beneficiaries/service users</p> <p>Secondary</p> <ul style="list-style-type: none"> Desk review of empirical evidence from peer-reviewed journals Desk review of WHO/UNICEF guidelines 	<p>12 KIs 12 FGDs</p> <p>2</p> <p>4</p> <p>4</p> <p>2</p> <p>12</p>	<ul style="list-style-type: none"> Thematic analysis for KIs and FGDs Synthesis of literature

⁵ Total of 87 KIs and 48 FGDs were conducted as part of the ETE. However, evident duplication is due to use of same KIs and FGDs to address multiple evaluation questions.

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DAC Criteria	Evaluation Questions	Evaluation Sub-Questions	Indicators / Assessment Criteria	Data Collection Sources and Methods	Sample ⁵	Data Analysis Method	
		2. Whether the mechanisms available to create awareness among communities were effectively linked to the project objectives?	Sources of creating awareness among communities	Primary	30 KIIs 36 FGDs	<ul style="list-style-type: none"> • Thematic analysis for KIIs and FGDs • Synthesis of literature 	
					KIIs with project staff		4
					KIIs with development partners' representatives		2
					KIIs with district managers		12
					KIIs with LHW coordinators		12
					FGDs with service providers (GPs)		12
					FGDs with LHWs		12
					FGDs with Beneficiaries		12
					Secondary <ul style="list-style-type: none"> • Desk review of awareness material and campaign reports 		
				Mass media campaign conducted for social and	Primary	34 KIIs 24 FGDs	

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DAC Criteria	Evaluation Questions	Evaluation Sub-Questions	Indicators / Assessment Criteria	Data Collection Sources and Methods	Sample ⁵	Data Analysis Method
			behavioral change in target communities, particularly focusing on girl child	KIs with M/o NHR&C representative KIs with provincial government representatives KIs with UNICEF project staff KIs with district managers KIs with LHW coordinators FGDs with LHWs FGDs with Beneficiaries Secondary Desk review of project documents	2 4 4 12 12 12 12	<ul style="list-style-type: none"> Thematic analysis for KIs and FGDs Synthesis of literature
		3. What was the relevancy of the project with the Federal and provincial Departments of Health, as well as the services being provided by the private sector?	Level of priority of childhood Pneumonia and Diarrhea in federal and provincial policies and strategic frameworks	Primary KIs with M/o NHR&C representative KIs with provincial government representatives KI with representatives of Pakistan Pediatric Association KIs with members of CSG Secondary <ul style="list-style-type: none"> Desk review of project documents UHC framework, Government health strategies, framework/ and notifications 	9 KIs 2 4 1 2	<ul style="list-style-type: none"> Thematic analysis for KIs Synthesis of literature
				Primary	9 KIs	

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DAC Criteria	Evaluation Questions	Evaluation Sub-Questions	Indicators / Assessment Criteria	Data Collection Sources and Methods	Sample ⁵	Data Analysis Method
		<p>4. To what extent the objectives of the project were consistent with the existing national/provincial policies and guidelines (particularly Pakistan government recently endorsed UHC BP) in line with global recommendations (WHO/GAPPD) for management of Diarrhea and Pneumonia among under five children in Pakistan and are sustainable?</p>	<p>Objectives of the project aligned to the recommendation of WHO/GAPPD for management of Pneumonia and Diarrhea and existing national and provincial policies including UHC Benefit Package</p>	KIIs with M/o NHR&C representative	2	<ul style="list-style-type: none"> • Thematic analysis for KIIs • Synthesis of literature
				KIIs with provincial government representatives	4	
				KII with representatives of Pakistan Pediatric Association	1	
				KIIs with members of CSG	2	
				<p>Secondary</p> <ul style="list-style-type: none"> • Desk review of project documents • Relevant Government health strategies/framework/notifications • UHC BP (WHO/GAPPD) guidelines/recommendations for management of Diarrhea and Pneumonia among under five children 		
		<p>5. Whether the project has been able to well adapt to the changing context and remain relevant, particularly related to Covid-19</p>	<p>Adaptation to the changing context and re-alignment of activities during 2020-21</p>	Primary	13 KIIs	<ul style="list-style-type: none"> • Case study analysis (Covid-19) • Thematic analysis for KIIs • Synthesis of literature
				KIIs with M/o NHR&C representative	2	
				KIIs with provincial government representatives	4	
				KIIs with vertical programmes	3	
				KIIs with UNICEF project staff	4	
				Case study	1	

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DAC Criteria	Evaluation Questions	Evaluation Sub-Questions	Indicators / Assessment Criteria	Data Collection Sources and Methods	Sample ⁵	Data Analysis Method
				Secondary Desk review of project documents		
Coherence	To what extent UNICEF's project interventions complement those implemented by the government, and whether design and delivery are in line with international standards?	6. Were the strategies or approaches realistic, appropriate, and adequate to achieve its desired goal and results?	Appropriateness and adequacy of interventions under Pneumonia and Diarrhea Project for child survival, both girls and boys	Primary	14 KIIs	<ul style="list-style-type: none"> • Synthesis of literature • Thematic analysis for KIIs
				KIIs with M/o NHR&C representative	2	
				KIIs with provincial government representatives	4	
				KIIs with vertical programmes	3	
				KIIs with provincial DHIS coordinator	2	
				KII with representatives of Pakistan Pediatric Association	1	
				KIIs with members of CSG	2	
				Secondary <ul style="list-style-type: none"> • Desk review of project documents • TORs of CSG and TWG 		
		7. To what extent UNICEF's project interventions complement those implemented by the government?	Alignment of activities with government's priorities, national commitments and national programmes and considered complementarity with other programmes operating in the provinces	Primary	14 KIIs	<ul style="list-style-type: none"> • Thematic analysis for KIIs • Synthesis of literature
				KIIs with M/o NHR&C representative	2	
				KIIs with provincial government representatives	4	
				KIIs with vertical programmes	3	
				KIIs with provincial DHIS coordinator	2	
				KII with representatives of Pakistan Pediatric Association	1	
KIIs with members of CSG	2					
Secondary <ul style="list-style-type: none"> • Desk review of project documents 						

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DAC Criteria	Evaluation Questions	Evaluation Sub-Questions	Indicators / Assessment Criteria	Data Collection Sources and Methods	Sample ⁵	Data Analysis Method
				<ul style="list-style-type: none"> Government health plan/notifications/guidelines 		
		<p>8. To what extent were external factors (political stability/instability, population movements, emergency context etc.) considered in the design and delivery of the intervention?</p>	<p>Risks identified with envisaged mitigation strategies at the inception of the project</p> <p>Mitigation strategies adopted during project implementation</p>	<p>Primary</p>	4 KIIs	<ul style="list-style-type: none"> Thematic analysis for KIIs Synthesis of literature
				<p>KIIs with UNICEF project staff</p>	4	
		<p>9. To what extent was the intervention design and delivery overall in line with international standards and principles?</p>	<p>Responsiveness of intervention design and implementation to global priorities and commitments (including GAPPD, SDGs)</p>	<p>Secondary</p> <ul style="list-style-type: none"> Desk review of project documents 		<ul style="list-style-type: none"> Synthesis of literature
Effectiveness	Has the project achieved its objectives and what were the major	<p>10. To what extent the project has achieved its objectives/outcomes</p>	<p>Key project outcomes</p> <ul style="list-style-type: none"> Updated national and provincial policies and guidelines, in line with 	<p>Primary</p>	53 KII	<ul style="list-style-type: none"> Thematic analysis for KIIs and FGDs
				<p>KIIs with M/o NHR&C representative</p>	2	

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DAC Criteria	Evaluation Questions	Evaluation Sub-Questions	Indicators / Assessment Criteria	Data Collection Sources and Methods	Sample ⁵	Data Analysis Method
		and what were the major factors influencing the achievement or non-achievement of the objectives/outcomes especially keeping in COVID pandemic crisis context from mid-term project evaluation onwards?	<p>GAPPD recommendations, available</p> <ul style="list-style-type: none"> • New training materials based on updated guidelines for Health Care Providers and Lady Health Workers developed and imparted • Joint accountability framework endorsed and notified by the competent authority at federal and provincial level • Local manufacturing of recommended P&D commodities in Pakistan • Implementation status of DHIS2 in Sindh and Punjab and review for assessing indicators on pneumonia and diarrhea • Domestic resource mobilization stakeholders for outreach identified and national coordination mechanism established • Commodities procurement process catalyzed with government leaders and pharmaceutical manufacturing stakeholders • Tracking of commodities under revised supply chain and logistics management 	<p>KIIs with provincial government representatives</p> <p>KIIs with vertical programmes</p> <p>KIIs with provincial DHIS coordinator</p> <p>KII with SCM team</p> <p>KII with representative of pharmaceutical manufacturers</p> <p>KIIs with district managers</p> <p>KIIs with district DHIS coordinators</p> <p>KIIs with district LHW coordinators</p> <p>KIIs with UNICEF project staff</p> <p>FGDs with service providers (GPs)</p> <p>FGDs with LHWs</p> <p>FGDs with Beneficiaries</p> <p>Secondary</p> <ul style="list-style-type: none"> • New training material on IMNCI • Joint accountability framework • Revised DHIS tools • EML and procurement lists 	<p>4</p> <p>3</p> <p>2</p> <p>1</p> <p>1</p> <p>12</p> <p>12</p> <p>12</p> <p>4</p> <p>12</p> <p>12</p> <p>12</p>	<ul style="list-style-type: none"> • DHIS Tools review

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DAC Criteria	Evaluation Questions	Evaluation Sub-Questions	Indicators / Assessment Criteria	Data Collection Sources and Methods	Sample ⁵	Data Analysis Method
			<p>system, national health sector's strategic plans as well as the UHC framework in the target provinces</p> <ul style="list-style-type: none"> Utilization of supplies provided to beneficiaries at public facilities <p>Influencing factors</p> <ul style="list-style-type: none"> Factors identified that influenced achievements or non-achievement of project outcomes Facilitators and barriers 			
		<p>11. To what extent the implementation of the project approaches worked as intended, particularly after the baseline in 2016 and COVID pandemic emergency crisis in country after early 2020 onwards and subsequent adjustments?</p>	<p>Project milestones identified at the inception of the project</p> <p>Achievement of project milestones against planned</p>	Primary	4 KIIs	<ul style="list-style-type: none"> Thematic analysis for KIIs Synthesis of literature
				KIIs with UNICEF project staff	4	
				Secondary Desk review of project documents		
		<p>12. How effectively various Federal and Provincial departments of health and programs</p>	<ul style="list-style-type: none"> Establishment and functioning of coordination mechanisms including implementation of Joint accountability framework at 	Primary	13 KIIs	<ul style="list-style-type: none"> Thematic analysis for KIIs Synthesis of literature
				KIIs with M/o NHR&C representative	2	
				KIIs with provincial government representatives	4	

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DAC Criteria	Evaluation Questions	Evaluation Sub-Questions	Indicators / Assessment Criteria	Data Collection Sources and Methods	Sample ⁵	Data Analysis Method
		coordinated among each other?	federal and provincial levels and functioning of CSGs	KIs with vertical programmes KIs with provincial DHIS coordinator KIs with representatives of CSG Secondary <ul style="list-style-type: none"> • Desk review of Joint accountability framework • TORs, reports/notification of CSG, TWG 	3 2 2	
		13. Whether the health care providers and community health workers have the required knowledge and skills to appropriately utilize the supplies as per WHO/UNICEF recommended standards?	<ul style="list-style-type: none"> • Revised National P&D/IMNCI guidelines utilized to improve knowledge and capacity building of Healthcare Workers • Capacities of health care providers built on management of P&D on updated commodities • Prescribing behaviors 	Primary KIs with M/o NHSR&C representative KIs with provincial government representatives KIs with vertical programmes KIs with provincial DHIS coordinator KIs with representatives of CSG KIs with district managers KIs with district LHW programme KIs with UNICEF project staff	65 KII 24 FGDs 48 Facilities 480 prescriptions 2 4 3 2 2 12 12 4	<ul style="list-style-type: none"> • Thematic analysis for KIIs, facility checklist and FGDs • Prescription review analysis • Synthesis of literature

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DAC Criteria	Evaluation Questions	Evaluation Sub-Questions	Indicators / Assessment Criteria	Data Collection Sources and Methods	Sample ⁵	Data Analysis Method		
				KIIs with facility in-charges	24			
				FGDs with GPs	12			
				FGDs with LHWs	12			
				Facility checklists	48 (24 BHUs and 24 RHCs)			
				Prescriptions' review	480 prescriptions			
				Secondary <ul style="list-style-type: none"> • Desk review of project documents • Revised National P&D/IMNCI guidelines • WHO/UNICEF recommended standards 				
		14. Whether monitoring and reporting mechanisms exists and effectively implemented for effective tracking of desired results and improvement in decision making and system?	<ul style="list-style-type: none"> • Tracking of Joint accountability framework implemented at federal and provincial levels • Reporting tools on facility level data updated with revised indicators on recommended commodities 	Primary	65 KIIs		<ul style="list-style-type: none"> • Thematic analysis for KIIs and FGDs • Facility level assessment • Synthesis of literature 	
					KIIs with M/o NHR&C representative			2
					KIIs with provincial government representatives			4
					KIIs with vertical programmes			3
					KIIs with provincial DHIS coordinator	2		
					KIIs with representatives of CSG	2		
					KIIs with district managers	12		
					KIIs with district LHW programme	12		

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DAC Criteria	Evaluation Questions	Evaluation Sub-Questions	Indicators / Assessment Criteria	Data Collection Sources and Methods	Sample ⁵	Data Analysis Method
				KIIs with UNICEF project staff	4	
				KIIs with facility in-charges	24	
				Secondary <ul style="list-style-type: none"> Desk review of project documents and management response Desk review of revised DHIS tools/reports 		
		<p>15. How effective are the 'innovative approaches like use of ARI Timers and Pulse Oximeters, and using social media for reaching out to sensitize primary and secondary beneficiaries to advocate and raise awareness on prevention management and treatment of childhood Pneumonia and Diarrhea and what results were achieved, are replicable within the Sindh/Punjab context and to scale up to other geographic areas?</p>	<ul style="list-style-type: none"> Effect of use of ARI Timers and pulse oximeter on management of Pneumonia and Diarrhea in girls and boys Effect of use of updated commodities by healthcare providers (public and private) on Pneumonia and Diarrhea management in girls and boys Effect of use of social media for sensitization 	Primary	90 KIIs 36 FGDs	<ul style="list-style-type: none"> Thematic analysis for KIIs, Facility checklists and FGDs Case Study Analysis Synthesis of literature
				All KIIs with federal, provincial and district stakeholders	66	
				KIIs with facility in-charges	24	
				Case study	1	
				FGDs with LHWs	12	
				FGDs with GPs	12	
				FGDs with beneficiaries	12	
				Secondary <ul style="list-style-type: none"> Desk review of project documents 		

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DAC Criteria	Evaluation Questions	Evaluation Sub-Questions	Indicators / Assessment Criteria	Data Collection Sources and Methods	Sample ⁵	Data Analysis Method
Efficiency	How well the resources were utilized to achieve the outputs while comparing it to alternative approaches?	16. How well the resources, both human and financial, have been managed to ensure timely, cost-effective and efficient attainment of results? To what extent costs incurred can be justified by the results achieved?	<ul style="list-style-type: none"> • Timeliness and cost-effectiveness of the achievement of project activities • Financial flow mechanism • Amount allocated and spent in project as well as within committed departments 	Primary	4 KIIs	<ul style="list-style-type: none"> • Value for money analysis • Thematic analysis for KIIs • Synthesis of literature
				KIIs with UNICEF project and finance staff	4	
				Secondary <ul style="list-style-type: none"> • Desk review of project documents and financial budgets 		
		17. To what extent planning, budgeting, monitoring and evaluation, supervision, coordination, logistics and financial management systems are functioning in support of the project objectives?	<ul style="list-style-type: none"> • Project management functions performed over time 	Primary	27 KIIs	<ul style="list-style-type: none"> • Thematic analysis for KIIs • Synthesis of literature
				KIIs with provincial government representatives	4	
				KIIs with vertical programmes	3	
				KIIs with provincial DHIS coordinator	2	
				KII with SCM team	1	
				KII with representative of pharmaceutical manufacturers	1	
				KIIs with district managers	12	
KIIs with UNICEF project staff	4					
Secondary <ul style="list-style-type: none"> • Desk review of project documents and management response 						
18. What are the implementation		Primary	90 KIIs 48 FGDs			

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DAC Criteria	Evaluation Questions	Evaluation Sub-Questions	Indicators / Assessment Criteria	Data Collection Sources and Methods	Sample ⁵	Data Analysis Method
		challenges from the perspective of both right holders and duty bearers especially for the under-five marginalized children of communities?	<ul style="list-style-type: none"> Challenges in ensuring availability of recommended commodities in the open market Interruption in supply of P&D recommended commodities at health facilities Acceptance of updated commodities of both right holders and duty bearers 	KIs with federal, provincial and district stakeholders KIs with facility in-charges FGDs with LHWs FGDs with GPs FGDs with beneficiaries FGDs with pharmacists/medical store keepers	66 24 12 12 12	<ul style="list-style-type: none"> Thematic analysis for KIs and FGDs Facility level assessment
		19. To what extent has the project leveraged additional resources to address identified gaps and scale up the best practices to other geographic areas through project technical expertise	<ul style="list-style-type: none"> Additional resources leveraged through support of government at federal and provincial levels Additional resources leveraged through advocacy with other donors and development partners 	Primary KIs with M/o NHR&C representative KIs with provincial government representatives KIs with vertical programmes KIs with provincial DHIS coordinator KIs with UNICEF project staff Secondary <ul style="list-style-type: none"> Review of project documents 	15 KIs 2 4 3 2 4	<ul style="list-style-type: none"> Synthesis of literature Thematic analysis for KIs
		20. What actions including innovations are needed to improve the coverage to scale up to other	<ul style="list-style-type: none"> Revised national IMNCI guidelines for healthcare providers with shorter duration Replicability and scalability potential of the project to 	Primary KIs with provincial government representatives KIs with vertical programmes	51 KIs 4 3	<ul style="list-style-type: none"> Thematic analysis for KIs Synthesis of literature

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DAC Criteria	Evaluation Questions	Evaluation Sub-Questions	Indicators / Assessment Criteria	Data Collection Sources and Methods	Sample ⁵	Data Analysis Method
		geographic areas in country through evidence-based decision making?	other provinces and regions of the country <ul style="list-style-type: none"> Supply chain management for commodities security at public facilities 	KIs with provincial DHIS coordinator KIs with representatives of CSG KIs with district managers KIs with UNICEF project staff KIs with facility in-charges Secondary <ul style="list-style-type: none"> Review of IMNCl guidelines 	2 2 12 4 24	
		21. Whether the availability of P&D supplies was cost-effective and is doable (keeping in view current COVID context scenario as well)?	<ul style="list-style-type: none"> Stock-out of recommended commodities at public facilities Availability of recommended commodities at medical stores and pharmacies in surveyed districts 	Primary KIs with provincial government representatives KI with SCM team KIs with vertical programmes KIs with provincial DHIS coordinator KIs with representatives of CSG KIs with district managers KIs with UNICEF project staff KIs with facility in-charges FGDs with LHWs FGDs with GPs	52 KIs 48 FGDs 4 1 3 2 2 12 4 24 12 12	<ul style="list-style-type: none"> Synthesis of literature Thematic analysis for KIs and FGDs Value for money analysis

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DAC Criteria	Evaluation Questions	Evaluation Sub-Questions	Indicators / Assessment Criteria	Data Collection Sources and Methods	Sample ⁵	Data Analysis Method
				FGDs with pharmacists/medical storekeeper FGDs with beneficiaries Secondary <ul style="list-style-type: none"> Desk review of project documents and SCM budget 	12 12	
Impact	<p>While assessing this for P&D Project we will see what has happened as a result of the programme or project in terms of policy translation and implementation and how many people have been targeted and benefited from project's interventions.</p> <p>What difference has the project made, positive or negative,</p>	<p>22. To what extent has the project achieved its goals in enhancing the health outcomes especially of under five children in the catchment communities in Sindh and Punjab target districts?</p>	<ul style="list-style-type: none"> Trends of morbidity and mortality due to pneumonia and diarrhea cases over project life Effect of use of recommended commodities on Pneumonia and Diarrhea management among girls and boys in project areas Capacities of Health Care Providers and Lady Health Workers enhanced for improved P&D management Prescribing behaviors Utilization of supplies provided to beneficiaries at public facilities 	Primary KIs with provincial government representatives KIs with vertical programmes KIs with provincial DHIS coordinator KIs with representatives of CSG KIs with district managers KIs with UNICEF project staff KIs with facility in-charges FGDs with LHWs FGDs with GPs	51 KIs 36 FGDs 48 Facilities 480 Prescriptions 4 3 2 2 12 4 24 12 12	<ul style="list-style-type: none"> Thematic analysis for KIs and FGDs Facility level assessment Prescription review analysis Synthesis of literature

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DAC Criteria	Evaluation Questions	Evaluation Sub-Questions	Indicators / Assessment Criteria	Data Collection Sources and Methods	Sample ⁵	Data Analysis Method	
				FGDs with beneficiaries	12		
				Facility checklists	48 (24 BHUs and 24 RHCs)		
				Prescriptions' review	480		
				Secondary <ul style="list-style-type: none"> DHIS reports review Health facility records relevant to P&D cases 			
		<p>23. To what extent the programme has been able to contribute to ownership and leadership of the Federal, provincial/area DOHs and inform evidence-based decision making or factors/challenges in influencing the achievement or non-achievement of outcomes?</p>	<ul style="list-style-type: none"> Level of participation of provincial government officials in child survival groups Provincial Minimum Service Delivery Package (MSDP) and UHC BP containing recommended commodities Revision of EML and procurement lists Facilitators and barriers 	Primary	30 KIIs	<ul style="list-style-type: none"> Thematic analysis for KIIs and FGDs Synthesis of literature 	
					KIIs with M/o NHR&C representative		2
					KIIs with provincial government representatives		4
					KIIs with vertical programmes		3
					KIIs with provincial DHIS coordinator		2
					KII with representatives of Pakistan Pediatric Association		1
					KIIs with representatives of CSG		2
					KIIs with UNICEF project staff		4
					KIIs with district managers		12
					Secondary <ul style="list-style-type: none"> DHIS reports Review of MSDP, EML, UHC BP and procurement lists 		

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DAC Criteria	Evaluation Questions	Evaluation Sub-Questions	Indicators / Assessment Criteria	Data Collection Sources and Methods	Sample ⁵	Data Analysis Method
		<p>24. To what extent the programme learned and evolved over the 6 years and whether there were other alternatives, more cost-effective strategies available to reach intended results?</p>	<ul style="list-style-type: none"> • Project adjustments made for behind schedule or under target outcome/output • Perspectives of policy makers and planners on alternate strategies 	Primary	13 KIIs	<ul style="list-style-type: none"> • Thematic analysis for KIIs • Synthesis of literature
				KIIs with M/o NHR&C representative	2	
				KIIs with provincial government representatives	4	
				KIIs with UNICEF project staff	4	
				KIIs with representatives of Pakistan Pediatric Association	1	
				KIIs with representatives of CSG	2	
				Secondary <ul style="list-style-type: none"> • Desk review of project documents 		
Sustainability	To what extent will the benefits of the project continue after UNICEF funding withdrawn?	<p>25. What evidences exists to see the likelihood of the project results are sustained and will be adopted by the Government to ensure that the goal of the programme is achieved?</p>	<ul style="list-style-type: none"> • Policies and guidelines updated through revision of IMNCI guidelines, MSDP, EML, procurement list and DHIS tools, UHC BP • Institutionalization of CSG and TWG forums • Supply of P&D recommended commodities at public facilities • Local manufacturing of recommended commodities • Effect on prescribing behaviors of healthcare providers and outreach workers 	Primary	90 KIIs 36 FGDs	<ul style="list-style-type: none"> • Thematic analysis for KIIs and FGDs • Prescription review analysis • Synthesis of literature
				KIIs with federal, provincial and district stakeholders	66	
				KIIs with facility in-charges	24	
				FGDs with GPs	12	
				FGDs with LHWs	12	
				FGDs with pharmacists/medical store keeper	12	
				Secondary <ul style="list-style-type: none"> • Review of federal and provincial policy documents and guidelines/ P&D related notifications 		
				Primary	13 KIIs	

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DAC Criteria	Evaluation Questions	Evaluation Sub-Questions	Indicators / Assessment Criteria	Data Collection Sources and Methods	Sample ⁵	Data Analysis Method
		26. What internal/external factors and drivers contribute to or constrain the sustainability of the project?	<ul style="list-style-type: none"> • Regularity of meetings of the federal and provincial coordination forums • Actions taken on decisions of CSG and TWG meetings • Supply chain management of commodities 	KIIs with M/o NHSR&C representative	2	<ul style="list-style-type: none"> • Thematic analysis for KIIs • Synthesis of literature
				KIIs with provincial government representatives	4	
				KIIs with UNICEF project staff	4	
				KIIs with representatives of CSG	2	
				KII with SCM team	1	
				Secondary • CSG and TWG minutes of meetings		
		27. What is being planned to sustain the process with government support beyond 2021?	<ul style="list-style-type: none"> • Availability of project sustainability plan with roles and responsibilities for government support at federal and provincial levels 	Primary	24 KIIs	<ul style="list-style-type: none"> • Thematic analysis for KIIs • Synthesis of literature
				KIIs with M/o NHSR&C representative	2	
				KIIs with provincial government representatives	4	
				KIIs with UNICEF project staff	4	
				KIIs with representatives of CSGs	2	
				KIIs with district managers	12	
				Secondary • Review of project documents		
		28. What is required to ensure prospects of sustainability of the project outcomes and the potential for replication or scale up of good practices	<ul style="list-style-type: none"> • Level of government ownership and donors' commitment for project sustainability • Replicability and scalability potential of the project activities to other provinces and regions of the country 	Primary	24 KIIs	<ul style="list-style-type: none"> • Thematic analysis for KIIs
				KIIs with M/o NHSR&C representative	2	
				KIIs with provincial government representatives	4	
				KIIs with UNICEF project staff	4	
				KIIs with representatives of CSGs	2	

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DAC Criteria	Evaluation Questions	Evaluation Sub-Questions	Indicators / Assessment Criteria	Data Collection Sources and Methods	Sample ⁵	Data Analysis Method
		and/or innovative approaches?		KIIs with district managers	12	
				Secondary • Desk review of project documents		
Cross-cutting Areas (Gender, Equity, Human Rights)	How P&D Project addressed cross-cutting issues, including gender, equity and human rights?	29. To what extent the cross-cutting issues such as gender, equity, based approaches were considered at various levels of planning and implementation?	<ul style="list-style-type: none"> Cross-cutting issues (gender, equity, HRBA and DRR) addressed in planning and implementation 	Primary	10 KIIs	<ul style="list-style-type: none"> Synthesis of literature Thematic analysis for KIIs
				KIIs with M/o NHR&C representative	2	
				KIIs with provincial government representatives	4	
				KIIs with UNICEF project staff	4	
				Secondary • Desk review of project documents		
		30. Are the services provided gender responsive and was a gender and human rights-based approach considered during implementation?	<ul style="list-style-type: none"> Equity and gender-responsiveness of programme outcomes 	Primary	48	<ul style="list-style-type: none"> Thematic analysis for KIIs Facility assessment Synthesis of literature
				Facility checklists	48 Facilities (24 BHUs and 24 RHCs)	
				Secondary • DHIS review • Project documents		
		31. To what extent the process of managing and mitigating risks within project (including internal and external processes) was achieved?	<ul style="list-style-type: none"> Risks identified with envisaged mitigation strategies at the inception of the project Mitigation strategies adopted during project implementation 	Primary	4 KIIs	<ul style="list-style-type: none"> Thematic analysis for KIIs Synthesis of literature
				KIIs with UNICEF project staff	4	
Secondary • Desk review of project documents						

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DAC Criteria	Evaluation Questions	Evaluation Sub-Questions	Indicators / Assessment Criteria	Data Collection Sources and Methods	Sample ⁵	Data Analysis Method
		<p>32. What have been the key lessons and experience of HCPs, Lady Health Workers and Lady Health Supervisors as agents of change and their contributions to other sectors?</p>	<ul style="list-style-type: none"> Experiences of HCPs, LHWs and LHS and their skill enhancement 	Primary	36 KIIs 24 FGDs	<ul style="list-style-type: none"> Thematic analysis for KIIs & FGDs Synthesis of literature Case study analysis
				KIIs with District LHW Coordinator	12	
				KIIs with facility in-charges	24	
				Case study on HCP experiences	1	
				FGDs with LHWs	12	
				FGDs with GPs	12	

Annex 3: List of Evaluation Reference Group Members

Ministry of National Health Services Regulation & Coordination

1. Dr. Sabeen Afzal (Deputy Director P-IV)
2. Dr. Malik Muhammad Safi (Technical Expert)
3. Dr. Ahsan Maqbool Ahmad (Technical Expert)
4. Dr. Hasan Bin Hamza (Technical Expert)

DOH Punjab

5. Dr. Shakeel Gondal (DHIS Coordinator)
6. Dr. Muhammad Yunis (Director Admin)
7. Mr. Usman Ghani (Communication Expert)
8. Mr. M. Farooq (MIS Expert)

DOH Sindh

9. Dr. Waqar Mahmood (Additional Director)

UNICEF SP Section

10. Dr. Luis Gorjon Fernandez (Chief Social Policy)
11. Ms. Esther Kaggwa (Regional Evaluation Advisor)
12. Ms. Shamshad Begum (Research and Evaluation Officer)
13. Mr. Junaid Tahir (Research Consultant)

UNICEF Project Team

14. Dr. Andrey Tulisov (Manager P&D Project)
15. Dr. Humaira Irshad (Programme Officer)
16. Dr. Mohammad Mushtaq Hussain Rana (Health Specialist Punjab)
17. Dr. Syed Kamal Asghar (Health Specialist Sindh)
18. Dr. Aamir Akram (Health Specialist Quetta)

Aga Khan University

19. Dr. Samia Faheem A. Khan

Annex 4: List of Documents Reviewed

1. WHO and UNICEF's Global Action Plan for Pneumonia and Diarrhea (2013)
2. National Health Vision 2016-2025 of Pakistan
3. Action Plan of National Health Services, Regulation & Coordination Division (2019-23)
4. National IMNCI guidelines (2010) and revised IMNCI guidelines (2017-18)
5. Provincial and Areas Health Sector Strategies (2012-2020)
6. Pakistan's National Drug Policy
7. The National Infant and Young Child Feeding (IYCF) Strategy
8. Pakistan's Approach to Total Sanitation (PATS)
9. Provincial Essential Medicines Lists
10. Provincial Annual Procurement Lists
11. Ten Point Vision for RMNCAH & Nutrition 2015-2020
12. Integrated Community Case Management (ICCM) guideline and Treatment Guidelines
13. Pakistan Demographic and Health Survey (PDHS) 2012-13 and 2017-18
14. UHC Benefit Package of Pakistan – Essential Package of Health Services for Community & PHC Levels (2019)
15. Annual DHIS Reports of Sindh and Punjab (2016 – 2020)
16. Landscape Analysis of P&D Project Report (2017)
17. Supply Chain Management Analysis Report (2017)
18. Budgetary Gap Analysis Report (2017)
19. Mid-term Evaluation of P&D Project (2019)
20. Reports of Evaluation Management Responses (EMR) Tracker

Annex 5: Responsibilities of Evaluation Team Members

Names	Designation	Roles and Responsibilities
Dr. Muhammad Adeel Alvi	Team Lead	<ul style="list-style-type: none"> • Overall management, planning, designing, execution and supervision of Project activities; • Liaising and Engagement with key stakeholders • Review of project documents; • Development of indicators and data collection tools; • Training of enumerators/data collection teams • Monitoring & Supervision of data collection process • Data analysis; • Development of draft and final report along with detailed recommendations and lesson learnt
Dr. Wasim Mirza	Public Health/M&E Expert	<ul style="list-style-type: none"> • Support in project management, planning, designing, execution and supervision of Project activities; • Assistance in engagement with key stakeholders • Support in development of indicators and data collection tools; • Hiring, selection and training of enumerators/ data collection teams • Development of data management plan • Data collection and data quality management; • Monitoring & Supervision; • Inputs in data analysis and report writing
Ms. Mariam Z. Malik	Evaluation Expert	<ul style="list-style-type: none"> • Support in overall management, planning, designing, execution and supervision of Project activities; • Liaising and Engagement with key stakeholders • Review of project documents; • Development of indicators and data collection tools; • Training of enumerators/data collection teams • Inputs in data analysis; • Inputs in development of draft and final report along with detailed recommendations and lesson learnt
Dr. Sarosh Iqbal	Research Expert	<ul style="list-style-type: none"> • Support in overall management, planning, designing, execution and supervision of Project activities; • Review of project documents; • Support in development of indicators and data collection tools; • Training of enumerators/data collection teams • Data analysis (quantitative and qualitative); • Support in development of draft and final report along with detailed recommendations and lesson learnt
Mr. Muattar Abbas	Finance Expert	<ul style="list-style-type: none"> • Support in overall management, planning, designing, execution and supervision of Project activities; • Review of project documents; • Support in development of indicators and data collection tools; • Inputs in data analysis and report writing

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Names	Designation	Roles and Responsibilities
Fareeha Jamil	Research Associate	<ul style="list-style-type: none"> • Support in project management, planning, designing, execution and supervision of Project activities; • Assistance in engagement with key stakeholders • Support in review of documents; • Coordination of activities; • Hiring, selection and training of enumerators/ data collection teams • Support in data handling and quality management; • Record keeping
Mr. Abdul Hamid	Senior Bio-Statistician	<ul style="list-style-type: none"> • Support in project management, planning, designing, execution and supervision of Project activities; • Data handling and quality management; • Data Analysis and generation of dummy tables • Inputs in report writing
Mr. Farhan Ahsan	Field Manager	<ul style="list-style-type: none"> • Support in project management, planning, designing, execution and supervision of Project activities; • Hiring, selection and training of enumerators/ data collection teams • Development of data management plan • Data collection and data quality management; • Monitoring & Supervision;
FIELD TEAM		
12 females and 12 males	Enumerators/ Sociologists	<ul style="list-style-type: none"> • Data Collection at district level
BACKSTOPPING AND ADVISORY TEAM		
Dr. Naeem uddin Mian	Health Specialist	<ul style="list-style-type: none"> • Backstopping and quality assurance • Review of project progress and evaluation data
Dr. Shehzad Hussain Awan	Health Systems Expert	<ul style="list-style-type: none"> • Inputs in data analysis and reporting
TRANSCRIBERS		
4 Data Transcribers	Transcribers	<ul style="list-style-type: none"> • Transcription of qualitative data

Annex 6: Risk Register

RISK REGISTER					
EXTERNAL RISKS					
Sr. #	Project risks	Assessment of impact of risks	Assessment of probability of risks	Possible Mitigation	Residual risks that cannot be managed
1.1	Political Situation				
1.1.1	Protests/unstable political situation	High	Medium	Contingency operational planning of field operations and support from local government	Country-wide impact
1.2	Field activities and staff transitions				
1.2.1	Field activities and operations	High	Medium	Set plan for operations for planning	Emergency outbreaks/epidemic/ pandemic (COVID-19) causing disruption in operationalization
1.2.2	Posting/Transfer of potential key officer (Government/ programme)	Medium	Medium	Rapport building sessions with Programme /Government officials	Key stakeholders/officials transferred and vacant positions
1.3	Security Situation				
1.3.1	Law & order situation	High	High	Only local field and operational teams to be involved/hired	Security threats in high-risk areas/no-go areas
1.4	Natural Disasters or Disease Outbreaks/Pandemic				
1.4.1	Extreme weather conditions	Medium	Medium	Variation in functioning hours according to the terrain/location	Natural calamities
1.4.2	Natural Calamities and Disasters	Medium	Low	Forecasting, precautionary measures for disaster management	Crisis and disasters (e.g., heavy rain, Floods)
1.4.3	COVID-19 pandemic	High	High	Adherence to COVID-19 SOPs	Restricted mobility and accessibility to communities and UC Offices

1.5	Capacity issues				
1.5.1	Inexperienced and un-qualified field teams	Medium	Low	Recruitment on the basis of previous experience within similar and local context and refresher trainings periodically	Local staff with requisite skills and qualification difficult to identify
1.6	Internal dynamics				
1.6.1	Potential drop-outs of field staff at any stage	High	Low	Local context specific reputable and experienced team would be involved	Unforeseen drop-outs during operationalization
1.7	Resistance from Community				
1.7.1	Resistance from Community Groups	High	High	Rapport building sessions with Community Influential and Gatekeepers	Unusual threats and resistance from community due to prevailing rumors, myths and misconceptions
1.8	Approval for Inception report				
1.8.1	Delay in seeking approval on Inception report and ethical review committee	High	High	Regular meetings with UNICEF team for seeking early approval on report	Unusual delay in getting feedback for inception report

INTERNAL RISKS

Sr. #	Project risks	Assessment of impact of risks	Assessment of probability of risks	Possible mitigation	Residual risks (that cannot be managed)
2.1	Security situation				
2.1.1	Mobility issues of field teams	High	Low	Local staff/teams will be engaged. Security and safety of field staff shall be adhered.	Poor accessibility or road network
2.2	Government/ Programme Support				
2.2.1	Inactive engagement of Government/ Programme in supporting the field operations and interventions	Medium	Low	Rapport building meetings with Technical team to gauge support	Key stakeholders/programme officials transferred and vacant positions

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2.2.2	Lack of coordination and rapport with district governments	Medium	Low	Placement of a reliable and transparent process to resolve disagreements and form coordination	Governments' policy and own interests
2.2.3	Newly approved Local Government Act	Medium	Medium	Rapport building	Uncertainty and Change of structure due to the newly approved Local Government Act
2.3	Staff transitions				
2.3.1	Posting/change of project technical staff	High	Low	Pool of alternate and equally qualified professionals maintained. A team of experts shall be working together so that in case of any change, transition remain smooth	Key positions become unavailable/vacant due to any unforeseen and unavoidable reason
2.4	Tight implementation timelines				
2.4.1	Delay in completion of linked planned activities due to interdependent nature	High	Low	Workplan to be adhered as much as possible	Project coming to an abrupt end or change in project activities

Annex 7: Ethical Approval – IRB Certificate



Research, Monitoring & Evaluation, Advocacy & Technical Assistance

Date: 12th Jan, 2022

Dr. Muhammad Adeel Alvi
Organization: Contech International
Address: 2-G, Model Town, Lahore, Pakistan

Study Name: "End term evaluation of pneumonia and diarrhea project"
Status of IRB Review: Approved

Dear Dr. Muhammad Adeel Alvi,

The RADS IRB meeting was convened on 11th January, 2022 for your IRB application submitted for Contech International. I am pleased to inform you that the Committee has decided to approve your IRB request for the evaluation project.

This approval will be valid for three months after the stated completion date of 30th April, 2022 i.e., until 30th July, 2022. If any changes are made in the study methodology you are requested to submit the relevant information to the RADS-IRB.

With regards,

Taimoor Ahmad
Chair, RADS IRB
IRB00010843



Research & Development Solutions (Pvt) Ltd, Roshan Aaj Center, Asad Market, I-9/4, Islamabad.
Tel: +92 51 4859482, 4859486

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Annex 8: Consent Form

Project Information	
Project Title: UNICEF End-Term Evaluation of Pneumonia and Diarrhea Project - "Accelerating policy change, translation and implementation for pneumonia and diarrhea commodities"	Sponsor: UNICEF Pakistan
Principal Investigator: Dr. Adeel Alvi	Organization: Contech International
Organization: Contech International	Phone: 092-42-35888798-99
Other Investigators: Ms. Mariam Z. Malik Dr. Wasim Mirza Dr. Sarosh Iqbal Ms. Asiya Nawaz	Location: 2-G Model Town, Lahore

1. PURPOSE OF THIS EVALUATION

You are being asked to participate in an evaluation designed to assess the effectiveness of Pneumonia and Diarrhea Project. It has been planned to independently evaluate the project's achievements and weaknesses, in order to be able to make recommendations for future programming. The information you would share shall only be used for this purpose.

2. PROCEDURES

After learning about its objectives, if you agree to participate in this evaluation, you will be asked to sign this consent form. Then you will be interviewed about childhood pneumonia and diarrhea. The interviewer will ask question one by one and fill out a tool. It will take approximately 30 minutes. Please note that the session may be recorded, only if you permit, for quality assurance purpose.

3. POSSIBLE RISKS OR DISCOMFORT

In case you feel uncomfortable to discuss any information during the interview/discussion, you are under no obligation to share them. You may partially or entirely withdraw from participating in this interview/discussion at any time.

4. POSSIBLE BENEFITS

Immediately the evaluation may not be of direct benefit to you, but your participation is likely to help us find out more about how to improve the diagnosis and treatment of pneumonia and diarrhea in U5 children. This evaluation will ultimately help improve health conditions in mothers and children in the country.

5. FINANCIAL CONSIDERATIONS

There is no financial compensation for your participation in this research.

6. AVAILABLE TREATMENT ALTERNATIVES

Not Applicable

7. DURATION

This session shall approximately take half an hour.

8. CONFIDENTIALITY

“Your identity in this evaluation will be treated as confidential. The results of the evaluation, may be published for scientific purposes but will not give your name or include any identifiable references to you.”

The information that we collect from this evaluation will be kept private. We will not be sharing information about you to anyone outside of the research team. Any information about you, will be coded with a number instead of your name. Only the researchers will know what your number is. It will not be shared with or given to anyone except UNICEF. The information that you shall provide will be shared with the researchers in written form and will only be used for analysis purpose for this evaluation.

9. TERMINATION OF EVALUATION

You are free to choose whether or not to participate in this evaluation. There will be no penalty or loss of benefits to which you are otherwise entitled if you choose not to participate.

10. AVAILABLE SOURCES OF INFORMATION

Any further questions you have about this evaluation will be answered by:

Name: Dr. Adeel Alvi

Phone Number: 092-42-35888798/99

11. AUTHORIZATION

I have read and understood the consent form, and I volunteer to participate in this evaluation. I voluntarily choose to participate, but I understand that my consent does not take away any legal rights in the case of negligence or other legal fault of anyone who is

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involved in this evaluation. I further understand that nothing in this consent form is intended to replace any applicable Federal, state, or local laws.

<p>Consent obtained: Yes / No</p> <p>(Encircle the response and in case of No, conclude the interview/FGD)</p>	<p>_____</p> <p>Name and Signature of Person Obtaining Consent:</p> <p>Date: _____</p>
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Annex 9: Evaluation Workplan

WORKPLAN FOR END TERM EVALUATION OF PNEUMONIA & DIARRHEA PROJECT													
Activities	Nov, 2021	Dec, 2021		Jan, 2022		Feb, 2021		Mar, 2021		Apr, 2022		May, 2022	
	16-31 days	1-15 days	16-31 days	1-15 days	16-31 days	1-15 days	16-28 days	1-15 days	16-31 days	1-15 days	16-30 days	1-15 days	16-31 days
INCEPTION PHASE	x	x											
Teaming up	x												
Desk Review	x												
Preparation for Inception Meeting	x	x											
Inception & Consultative Meetings		x											
Development & Finalization of Workplan		x											
Finalization of Sampling Plan		x											
Development of Inception Report		x											
Sharing & Finalization of Inception Report with stakeholders		x											
PREPARATION PHASE		x	x	x									
Development and Finalization of Indicators		x											
Development of Data Collection tool		x											
Development and Finalization of tool		x											
Development of CAPI assessment tools on CSPro		x											
Upload assessment tools on CSPro		x											
Pre-testing of CAPI assessment tools		x											
Sharing of Pre-testing Findings		x											
Finalization of tools based upon pre-testing (if required)		x											

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WORKPLAN FOR END TERM EVALUATION OF PNEUMONIA & DIARRHEA PROJECT													
Activities	Nov, 2021	Dec, 2021		Jan, 2022		Feb, 2021		Mar, 2021		Apr, 2022		May, 2022	
	16-31 days	1-15 days	16-31 days	1-15 days	16-31 days	1-15 days	16-28 days	1-15 days	16-31 days	1-15 days	16-30 days	1-15 days	16-31 days
Development and Finalization of CAPI Assessment Tools and Dashboard		x											
Short listing and interviews of Field teams		x											
Hiring of district specific field teams		x											
Development of brief Training Guide		x											
Preparation for training of data collection teams		x											
Trainings of Data Collection Teams		x	x										
Development and Finalization of Field Micro Plan and Checklist		x	x										
FIELD WORK PHASE			x										
Data Collection			x										
Monitoring and Supervision of Field Teams			x										
DATA MANAGEMENT PHASE			x	x									
Field editing and real-time entry			x	x									
Maintenance of log file and database			x	x									
Validation of Entered data			x	x									
Data cleaning of entry/Online monitoring and logical errors			x	x									
Development of clean dataset				x									
Data Transcription and Coding				x									
ANALYSIS AND REPORTING PHASE					x	x	x	x	x	x	x		

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WORKPLAN FOR END TERM EVALUATION OF PNEUMONIA & DIARRHEA PROJECT													
Activities	Nov, 2021	Dec, 2021		Jan, 2022		Feb, 2021		Mar, 2021		Apr, 2022		May, 2022	
	16-31 days	1-15 days	16-31 days	1-15 days	16-31 days	1-15 days	16-28 days	1-15 days	16-31 days	1-15 days	16-30 days	1-15 days	16-31 days
Development of Data Analysis Plan				x									
Data Analysis				x	x								
Development of Report Outline					x								
Development of Draft Report						x	x	x					
Sharing of Draft Report									x				
Finalization of Report after incorporating Feedback/Suggestions received from UNICEF									x	x	x	x	
Submission of Final Report to UNICEF												x	x

Annex 10: Data Collection Tools

End-Term Evaluation of P&D Project
Interview Guide for Federal and Provincial Key Informants
(MINISTRY, PROVINCIAL HEALTH DEPARTMENT, PROJECT/PARTNERS)

<p>Before starting interview, remember to:</p> <ul style="list-style-type: none"> ⇒ Introduce yourself and explain purpose of visit ⇒ Get formal consent for the interview and provide brief of evaluation objectives ⇒ Ask for permission for audio recording of the interview
--

INTERVIEW DETAILS
Federal/Province:
Name:
Designation:
Gender:
Name of Moderator:
Name of Note Taker:
Date:

Relevance

1. What are Government's priorities for childhood illnesses?
 - How do you describe the focus on morbidity and mortality associated with childhood pneumonia and diarrhea?
2. In your opinion, how relevant and meaningful were the P&D Project's objectives and activities in addressing the needs and priorities of the marginalized and vulnerable children in the project areas?
 - Was any need assessment done prior to the start of the P&D Project?
 - Was beneficiaries' mapping done? Were their demands and requirements catered in designing of the project, specifically for children from marginalized, poor and vulnerable segments of the society as well as from low-income and rural areas?
 - Were prevailing capacities and status of relevant commodities kept in mind while rolling out the interventions?

3. Whether the mechanisms available to create awareness among communities were effectively linked to the project objectives?
 - What were the sources of creating awareness among communities?
 - Was mass media campaign designed while keeping in view the requirements of social and behavioral change in target communities, particularly focusing on girl child?
4. What was the relevancy of the project with the Federal and provincial Departments of Health, as well as the services being provided by the private sector?
 - Focus of priority on childhood Pneumonia and Diarrhea in federal and provincial policies and strategic frameworks
5. How the objectives of the project were consistent with the existing Global, national and provincial policies and guidelines for management of P&D among under five children in Pakistan and were they sustainable in your opinion?
 - Alignment of project objectives and activities with the recommendation of WHO/GAPPD for management of Pneumonia and Diarrhea
 - International commitments like SDGs
 - Existing national and provincial policies including National Health Vision and newly formulated UHC Benefit Package
6. Whether the project has been able to well adapt to the changing context and remain relevant, particularly related to COVID-19?
Probe:
 - What were the challenges? How they were mitigated?
 - What adjustments were made to the changing context and how the project was re-aligned during 2020-21 with regards to COVID-19 scenario?

Coherence

7. What is your opinion about these interventions under P&D Project to achieve their desired goal and results?
 - Were the interventions appropriate, adequate and realistic for improving child survival? Can you explain with example?
8. How are UNICEF's project interventions complementing the work being carried out/ implemented by the government, specifically with regards to UHC-BP EPHS?
9. What technical support has been provided by UNICEF to national and provincial governments?
10. What external factors were considered in the design and delivery of the intervention?
 - Probe for consideration of political stability/instability, population movements, emergency context, like Covid-19
 - Risks identified with envisaged mitigation strategies at the inception of the project
11. In your opinion, was the design and delivery of interventions in line with international standards and principles?
 - Were project objectives aligned with global recommendations (GAPPD) and SDGs?

Effectiveness

12. In your view, has the P&D project achieved its objectives/outcomes?

Probe for achievement of key project outcomes:

- Policy Change - Existing national/provincial policies and guidelines are updated in line with global recommendations (WHO/GAPPD) for management of diarrhea and pneumonia among under five children in Pakistan
 - Policy Translation - Translation of revised and updated P&D treatment guidelines into relevant action plans
 - Policy Implementation - Availability of essential commodities (amoxicillin DT, zinc DT, co-packaged ORS and zinc, oxygen, ARI timers, and pulse oximeters) for treatment of childhood P&D in Pakistan
 - Knowledge Management - Translation of lessons learned from this investment to other settings/broader geographical areas within Pakistan
13. In your opinion, did the implementation of the project approaches work as intended, particularly after the baseline in 2016 and COVID-19 pandemic emergency crisis in country after early 2020 onwards and subsequent adjustments?
- Achievement of project milestones against planned
 - During and post-COVID-19 (2020-2021)
 - Explain related adjustments and their rationale with examples
14. What were the major factors influencing the achievement or non-achievement of the objectives/outcomes of the project?
- Influencing factors, including facilitators and barriers for achievement or non-achievement of project outcomes, role of COVID-19 pandemic crisis context from MTE onwards
15. How effectively various Federal and Provincial departments of health and programs coordinated among each other during P&D project implementation?
- Establishment and functioning of coordination mechanisms including formation and functioning of TWG and CSGs
 - Implementation of Joint accountability framework at federal and provincial levels
16. Do you think that the trainings imparted under P&D project enabled health care providers and community health workers with required knowledge and skills to appropriately utilize the supplies as per WHO/UNICEF recommended standards?
- Revision of National P&D/IMNCI guidelines
 - Capacities of health care providers built on management of P&D
 - Any changes observed in their prescribing behaviors
17. Whether monitoring and reporting mechanisms exist and were effectively implemented for effective tracking of desired results and improvement in decision making?
- Tracking of Joint accountability framework implemented at federal and provincial levels
 - DHIS reporting tools on facility level data updated with revised indicators on recommended commodities and used for decision making
 - Use of Post-MTE EMR Tracker on GEROS

- Information management systems related to supply of commodities (like LMIS)
 - Roll-out status of DHIS-2
18. In your opinion, how effective were the 'innovative approaches' like use of ARI Timers and Pulse Oximeters?
- Improvement in management of Pneumonia and Diarrhea in girls and boys through use of ARI Timers and pulse oximeters at community as well as facility levels
 - Increase in child survival within the intervention districts
19. How effective was the use of social media for reaching out to sensitize primary and secondary beneficiaries to advocate and raise awareness on prevention management and treatment of childhood P&D?
- Which platforms of social media (Facebook, Twitter, WhatsApp) were used?
 - Which type of content was used for advocacy and awareness raising (local language material, pictorials, audio/videos etc.)?
 - What was their effectiveness? How was it gauged? Probe for increase in uptake of services.

Efficiency

20. In your point of view, how well the human and financial resources have been managed to ensure timely, cost-effective and efficient attainment of results?
- Achievement of project activities as planned? Any lags or delays (especially in context of COVID-19)
 - Key inputs of the project vs budget utilized for the inputs
 - Outputs achieved in a given time frame vs the planned outputs for that particular time frame
 - Contribution by the achieved outputs towards the projected outcomes
21. In your opinion, how did the following functions support in achievement of the project objectives?
- Planning
 - Budgeting
 - Monitoring, evaluation and supervision
 - Coordination
 - Logistics management systems
 - Financial management systems
22. What were the implementation challenges from the perspective of both right holders and duty bearers especially for the under-five marginalized children of communities?
- Challenges in ensuring availability of recommended commodities in the open market for U5 children
 - Interruption in supply of P&D recommended commodities at health facilities
 - Acceptance of updated commodities by both right holders and duty bearers
 - Any other?

23. To what extent has the project leveraged additional resources to address identified gaps and scale up the best practices to other geographic areas through project technical expertise?
- Additional resources leveraged through support of government at federal and provincial levels
 - Additional resources leveraged through advocacy with other donors and development partners
 - Role of project team in potential scaling up the best practices in other provinces/areas
 - Any other, please give examples?
24. What in your opinion is the value addition in terms of number of lives saved and morbidity reduced?
- Trends of pneumonia and diarrhea cases over project life
 - Improvement in child survival indicators in the project intervention areas
 - Increased utilization of P&D updated commodities
 - Any other?
25. What actions including innovations are needed to improve the coverage to scale up to other geographic areas in country through evidence-based decision making?
26. Whether the availability of P&D supplies was cost-effective and is doable, particularly in current COVID-19 context?
- Comparison with alternative approaches
 - Availability of recommended commodities at public facilities and medical stores and pharmacies
 - Local drug manufacturing

Impact

27. In your opinion, what were the major impacts of the project in enhancing the health outcomes especially of U5 children in the catchment communities in Sindh and Punjab target districts?
- Reducing morbidity and mortality due to pneumonia and diarrhea during project life
 - Increased use of recommended commodities on Pneumonia and Diarrhea management among girls and boys in project areas
 - Enhanced capacities of Health Care Providers and Lady Health Workers on P&D management
 - Change in prescribing behaviors
 - Increased utilization of supplies provided to beneficiaries at public facilities
28. Do you think that the project has been able to contribute to ownership and leadership of the Federal, provincial DOHs and in evidence-based decision making? Explain with examples.
29. Has the project learned and evolved over the 6 years and whether there were other alternatives, more cost-effective strategies available to reach intended results?
- Project adjustments made for behind schedule or under target outcome/output
 - Cost-effective measures taken and perspective on alternate strategies

Sustainability

30. What evidence exists regarding sustainability of project results which may be adopted by the Government to achieve the project goal?
 - Explain with examples (e.g., updated EML, P&D management guidelines, inclusion of updated commodities in MSDP/EPHS, use of ARI timers, pulse oximeters, oxygen, updated DHIS tool with P&D indicators, implementation of DHIS2 etc.)
31. What internal/external factors and drivers contribute to or constrain the sustainability of the project?
 - Government ownership and donors' commitment for project sustainability
 - Regularity of meetings of federal and provincial coordination forums
 - Actions taken on decisions of CSG and TWG meetings
 - Institutionalization/regularization of project interventions
32. What is being planned to sustain the process with government support beyond 2021?
 - Availability project sustainability plan with roles and responsibilities for government support at federal and provincial levels
 - What are other potential sources of funding to support the activities of P&D Project?
33. What are the interventions that have established their potential for replication or scale up to other geographic settings?
34. In your opinion, in addition to P&D Project, what should be done to improve childhood P&D situation in general?

Cross Cutting Areas (Gender, Equity, Human Rights)

35. How well were the cross-cutting issues such as gender, equity, human rights-based approaches considered at various levels of planning and implementation?
 - Was gender disaggregated data generated?
 - Was geographic implementation aimed to bring equity?
 - How did the project ensure focus on vulnerable and marginalized communities, particularly, girl child? Human rights linkages of project interventions?
36. Were the services provided gender responsive and was a gender and human rights-based approach considered during implementation?
 - Explain with examples including demand (girls and boys) and supply side (involvement of LHWs and HCPs) factors
37. What have been the key lessons and experience of HCPs, LHWs and Lady Health Supervisors as agents of change in addressing the cross-cutting issues including gender and equity?

End-term Evaluation of P&D Project

INTERVIEW GUIDE FOR PROVINCIAL DHIS COORDINATOR

Before starting interview, remember to:

- ⇒ Introduce yourself and explain purpose of visit
- ⇒ Get formal consent for the interview and provide brief of evaluation objectives
- ⇒ Ask for permission for audio recording of the interview

INTERVIEW DETAILS
Name of the DHIS Coordinator:
Designation:
Province:
Gender:
Name of Moderator:
Name of Note Taker:
Date:

1. Can you share something about routine MIS, especially with regards to reporting on childhood illnesses (particularly P&D)?
Probes:
 - What is the current status of DHIS and DHIS2 in your province?
 - Has the revision, updating and printing of DHIS tools, manuals and software taken place in your province?
 - Has DHIS been updated to include any relevant pneumonia and diarrhea treatment /commodity indicators and linked with LMIS?
2. In your opinion, what is the use of DHIS in context of management of children suffering from Pneumonia and Diarrhea?
Probes:
 - Are you satisfied with the quality (accuracy of information, completeness and timeliness) of DHIS recording and reporting? If not, how can that be improved?
 - Does DHIS help keeping the record of referrals made in complicated cases?
3. What has been the role of UNICEF in the following processes?
Probes:
 - Updating of DHIS tools with P&D indicators
 - Implementation of Integrated digital HLMIS
 - Roll out of DHIS2
4. Was any orientation provided for implementation of updated DHIS and DHIS2?
Probes:

- How many trainings were held and number of staff was trained? At which level (e.g., facility, HCP)?
 - Any challenge faced in conducting these orientations/trainings?
5. Do you think that current DHIS indicators sufficiently cover the data requirements for managing Pneumonia and Diarrhea? Do you suggest to include some more indicators?
- Probes:
- Are any indicators related to new commodities included in the DHIS? If yes, did the facility staff feel any difficulty in using the tools after these changes?
 - Can you comment on the capacities of staff on using updated DHIS tools? If there are any gaps, how can these be addressed?
6. Are these updated DHIS tools with inclusion of P&D indicators available in the province for recording and reporting?
- Probes:
- What has been UNICEF's role in ensuring availability?
 - Was the availability sufficient and provided adequate cover to indicate the shortage of commodities?
 - If no, what were faced challenges and was there any other system of reporting/recording P&D indicators used?
 - How were these challenges mitigated?
7. Are any decisions made regarding management of Pneumonia and Diarrhea on the basis of the reports generated from the district level? If yes kindly give some examples?
8. What were the key challenges relevant to P&D case reported during Covid-19? How they were resolved?
9. How do you see the contribution of UNICEF P&D project in improving reporting and recording regarding pneumonia and diarrhea in your province? Any suggestions for replication and scaling up?

End-term Evaluation of P&D Project
INTERVIEW GUIDE FOR PPA MEMBER

Before starting interview, remember to:

- ⇒ Introduce yourself and explain purpose of visit
- ⇒ Get formal consent for the interview and provide brief of study objectives
- ⇒ Ask for permission for audio recording of the interview

INTERVIEW DETAILS
Name of the PPA Representative:
Designation:
Gender:
City/Province:
Contact No:
Name of Moderator:
Name of Note Taker:
Date of Interview:

1. What are Government’s priorities for childhood illnesses?
Probe:
 - How do you describe the focus on morbidity and mortality associated with childhood pneumonia and diarrhea?

2. What is the role of PPA in reduction of under-5 childhood mortality and morbidity, particularly regarding pneumonia and diarrhea?

3. In your opinion, has UNICEF's P&D project supported government efforts in managing P&D? if yes can you please explain in what ways?
Probe:
 - Were project objectives aligned with global recommendations (GAPPD) and federal and provincial policies?
 - Probe for role in capacity building, policy formulation, evidence base decision making, joint accountability framework, activities level

4. Is PPA part of Child Survival Group established at provincial level? What has been its involvement?
Probe:
 - Did PPA recommended any actions to CSGs regarding management of P&D cases?
 - Are actions taken on those recommendations? If not please explain why?

- Are actions taken on decisions of CSG? If yes, can you share any example? if no, please explain why?
5. With regards to management of P&D, has PPA been a part of updating IMNCI guidelines, EML, MSDP/EPHS, capacity building initiative?
Probe:
- Can you explain PPA's role?
 - What is your opinion about these interventions? And how do you envisage their contribution in improving child survival?
6. What have been the major challenges and drivers related to achievements of P&D Project?
Probe:
- Can you provide any example of any facilitators and barriers?
 - How do you see the effects of Covid-19 on implementation of project activities? What were faced challenges and how were they mitigated?
7. How do you see the contribution of UNICEF P&D project in improving management of pneumonia and diarrhea?
Probe:
- What is your opinion about the sustainability of these activities beyond project life (after support from UNICEF ends)?
 - Any suggestions for replication and scaling of project interventions?

End-term Evaluation of P&D Project
INTERVIEW GUIDE FOR DISTRICT MANAGER

Before starting interview, remember to:

- ⇒ Introduce yourself and explain purpose of visit
- ⇒ Get formal consent for the interview and provide brief of evaluation objectives
- ⇒ Ask for permission for audio recording of the interview

INTERVIEW DETAILS
Name of the District Manager:
Designation:
Gender:
District:
Contact No:
Name of Moderator:
Name of Note Taker:
Date:

1. First, I'd like to ask you about the provincial guidelines/policies to address the challenges related to child health services.

Probes:

- Do you have any information related to revised P&D national/ provincial policies and guidelines (like Essential Medicines Lists and IMNCI)?
- If yes, how are the revised provincial guidelines utilized to improve knowledge and capacity building of healthcare workers?

2. What is the situation of services for Pneumonia and Diarrhea in your district?

Probes:

- What initiatives district has taken for improvement of these services?
- Are there any district strategic or operational health plans?
- Are you aware about the UNICEF funded P&D project?

3. What is the status of human resource (staff) at primary level health facilities to management childhood pneumonia and diarrhea in your district?

Probes:

- Is there sufficient staff at health facilities and in the communities to provide these services?

- What are care providers related issues for delivery of these services?
- What initiatives government has taken to retain the staff on health facilities?
- How do you address the absenteeism?
- What are the major reasons for unavailability of staff? In your opinion, how can situation of HR be improved at public sector health facilities?

4. What do you think about the competence level of staff at primary level facilities and community-based staff to manage diarrhea and pneumonia in children?

Probes:

- What is your routine mechanism for in-service training and capacity building of these staff in your district?
- Do you have any in-service training program for staff at primary level health facilities and community?
- Any specific trainings carried out on IMNCI Guidelines? Are you aware of IMNCI trainings provided to healthcare providers in your district?
- If you don't have mechanism of in-service training in your district what else you do for this purpose?

5. We are interested to learn about community health workers, mainly LHWs. What is their role in provision of pneumonia and diarrhea management services, regarding diagnosis, treatment and referral?

Probes:

- Is there a regular training for community health workers?
- What is the quality of pneumonia and diarrhea management services provided by them?
- What is your feedback on use of ARI Timers by LHWs in management of Pneumonia?
- What are your suggestions to further improve their services?

6. What mechanisms are available to create awareness among communities regarding P&D?

Probes:

- Sources of creating awareness among communities
- Mass media campaign conducted for social and behavioral change in target communities, particularly focusing on girl child

7. What is the current status of facility resources (building, equipment and supplies) for child health services, particularly Pneumonia and Diarrhea?

Probes:

- Is sufficient amount of antibiotics (particularly Amoxicillin, L-ORS and Zinc) provided to the primary health facilities and community-based service providers? if not why?
- What are the common reasons for stock-outs of these medicines and supplies?
- Are there any specific equipment items, like ARI timers and pulse oximeters, provided to the service providers for better managing cases of Pneumonia?
- Are all your primary level health facilities provided with oxygen supply for managing childhood Pneumonia? if not why?
- In your opinion, how can the availability of medicines, supplies and equipment be ensured at the primary health facilities and the community-based workers?

8. How do you see the effect of COVID-19 on supply and utilization of P&D commodities in your district?

Probes:

- What were the faced challenges? And how they were mitigated?

- What adjustments were made to the changing context and how the interventions were re-aligned during 2020-21 with regards to COVID-19 scenario?

9. Can you throw some light on your routine MIS? What is the current status of DHIS?

Probes:

- What do you think about the sufficiency of DHIS tools for recording and reporting regarding management of Pneumonia and Diarrhea?
- Are you aware about the inclusion of Pneumonia and Diarrhea indicators in DHIS?
- Are the DHIS reporting tools on facility level data updated with revised indicators on recommended commodities?
- Are you satisfied with the quality (accuracy of information, completeness and timeliness) of DHIS recording and reporting? If not, how can it be improved?
- Do these reports provide adequate cover and indicate the shortage of commodities?
- Have you made any decisions regarding management of pneumonia and diarrhea on the basis of the reports generated at district level? If yes, kindly give some examples?
- In your opinion, have the recording and reporting of pneumonia and diarrhea indicators in DHIS improved service delivery in your district?

10. What are your inbuilt mechanisms for monitoring and supervision of facility and community-based staff?

Probes:

- What is the current supervisory system? What are the various levels of supervisory responsibilities?
- Is the supervision integrated or service specific e.g., for EPI, CMWs, LHWs, etc.?
- Is there any notified district schedule for supervisory visits to the primary level facilities and community-based workers?
- What are your suggestions to improve the monitoring and supervision of child health services in your district?

11. How frequently do you conduct evaluation to monitor the achievement of your facilities?

Probe:

- Have you generated or published any report/s of your evaluations? Kindly give some examples?

12. Do you have liaison with the local community, key persons, Community Based Organizations (CBOs) or elected representatives of the district?

Probes:

- What role do they play for acceptance of health services provided by you? Kindly give some examples about the support they provide?
- What is usefulness of local community liaison? Give examples?

13. What is your impression of current utilization of Pneumonia and Diarrhea management services at primary level health facilities and in the community? How do you rate it as under, normal or over utilization?

Probes:

- What is the level of utilization of supplies (P&D updated commodities) provided to beneficiaries at public facilities?
- If you are asked to take measures at various levels for improvement of pneumonia and diarrhea management services, what measures will you suggest at managerial, facility and community level?

14. What in your opinion is the potential for replication or scale up of good practices and/or innovative approaches like use of ARI timers, pulse oximeters and updated P&D commodities for effective management of pneumonia and diarrhea?

Probe:

- How is the government planning to sustain the initiatives taken up by UNICEF regarding the same?

End-term Evaluation of P&D Project
INTERVIEW GUIDE FOR DISTRICT DHIS COORDINATOR

Before starting interview, remember to:

- ⇒ Introduce yourself and explain purpose of visit
- ⇒ Get formal consent for the interview and provide brief of evaluation objectives
- ⇒ Ask for permission for audio recording of the interview

INTERVIEW DETAILS
Name of the DHIS Coordinator:
Designation:
Gender:
District:
Contact No:
Name of Moderator:
Name of Note Taker:
Date:

1. What is the current status of DHIS implementation in your district?

Probes:

- If under development or not functional then please explain about the reasons?
- Do you have information about policies and guidelines updated through revision of DHIS tools, specifically in context of childhood pneumonia and diarrhea?

2. What do you think about the sufficiency of DHIS tools for recording and reporting necessary information regarding management of Pneumonia and Diarrhea?

Probes:

- Are you aware about the inclusion of Pneumonia and Diarrhea indicators in DHIS?
- Are the DHIS reporting tools on facility level data updated with indicators on recommended commodities as per the revised IMNCI guidelines?
- Are you satisfied with the quality (accuracy of information, completeness and timeliness) of DHIS recording and reporting? If not, how can it be improved?
- Do these reports provide adequate cover and indicate the shortage of commodities? If no, what are other reporting mechanisms?
- Have you made any decisions regarding management of pneumonia and diarrhea on the basis of the reports generated at district level? If yes, kindly give some examples?

3. In your opinion, have the recording and reporting of pneumonia and diarrhea indicators in DHIS improved service delivery in your district?

Probes:

- Can you compare the before and after effect of revision?
- Do you think the tool facilitates in tracking of updated P&D commodities?
- Do you think there is any need for further improving DHIS tools for recording and reporting related to childhood pneumonia and diarrhea?
- How can it be further improved?

4. Are you aware about any capacity building initiatives taken for rolling out DHIS and DHIS2 implementation in your district?

Probes:

- Did you take part in any of such trainings?
- In your opinion, is there a requirement for further such trainings?

5. If the DHIS are updated to cover the recommended commodities, what issues have you faced in the process, particularly in COVID-19 scenario?

Probes:

- What were the facilitators and barriers in implementation?
- What were the lessons learnt from updating the DHIS tools for primary level facilities?

6. How do you see the effect of COVID-19 on rolling out the implementation of DHIS and DHIS2?

Probes:

- What were faced challenges? And how they were mitigated?
- What adjustments were made to the changing context and how the interventions were re-aligned during 2020-21 with regards to COVID-19 scenario?

End-term Evaluation of P&D Project
INTERVIEW GUIDE FOR DISTRICT LHW COORDINATOR

Before starting interview, remember to:

- ⇒ Introduce yourself and explain purpose of visit
- ⇒ Get formal consent for the interview and provide brief of evaluation objectives
- ⇒ Ask for permission for audio recording of the interview

INTERVIEW DETAILS
Name of the LHW Coordinator:
Designation:
Gender:
District:
Contact No:
Name of Moderator:
Name of Note Taker:
Date:

1. I would like to know about your own views and perceptions about estimated number of cases of pneumonia and diarrhea in your district?

Probes:

- Average cases of pneumonia and diarrhea LHWs deal daily/weekly/monthly.
 - Can you compare case load before and after COVID-19?
- Do LHWs get sufficient time to deal with pneumonia & diarrhea cases, in addition to their other responsibilities?
 - Has COVID-19 pandemic effected the service delivery?

2. In your opinion, are your LHWs trained to handle pneumonia and diarrhea cases?

Probes:

- Have they received induction & on job trainings (e.g., IMNCI) regarding pneumonia and diarrhea? Who provided these trainings (probe for UNICEF)?
- Was any pictorial and/or audio-visual material related to pneumonia and diarrhea provided by UNICEF?
- Do LHWs use these materials for awareness raising of the community, especially mothers of children under 5 years? if not why?
- When did they receive last training/refreshers?
- Did these trainings help them in catering to the needs and requirements of their catchment community? If yes, how. If not, why not? Any suggestions for further improvement?

3. Are there any media campaigns, including social media, to raise awareness on childhood pneumonia and diarrhea in your district?

Probes:

- Are the LHWs involved in these campaigns? What is their role?
 - What in your opinion, how useful were these awareness campaigns?
 - What can be further done to improve awareness of local community on P&D?
4. Are the LHWs sufficiently equipped with medicines and supplies for management of pneumonia and diarrhea according to the needs and requirements of the community? If not why?

Probes:

- Availability of Amoxicillin, antipyretic, zinc, LORS, ARI timer, thermometer, dispersible tablets?
 - What is the source of P&D commodities? Who provides them to your program? (probe for UNICEF)
 - What do you think about the effectiveness of use of ARI Timers and pulse oximeters in management of Pneumonia and Diarrhea in your district?
5. What challenges do LHWs face while managing pneumonia & diarrhea cases in the community, particularly in COVID-19 scenario?

Probes:

- Do they face any challenge with respect to their skill and knowledge, and feel the need for more training?
 - Do they face any challenges from the community in managing P&D cases?
 - Do they face gaps in sufficient supplies and equipment according to the need?
6. Have you established any liaison with any public health facilities for referral? How does health facility staff generally deal with LHWs referred cases of severe pneumonia and diarrhea?

Probes:

- Do you have linkages with higher level facilities? (e.g., BHU, RHC, THQH, DHQH & tertiary care hospital)
 - What is reported experience of patients referred to these facilities? Do they generally receive supportive and considerate treatment? Give some examples.
7. What is the usual coordination and monitoring mechanism of outreach services?

Probes:

- Describe the coordination mechanisms and working relationship between LHWs and LHSs and others?
8. How do you see the effect of COVID-19 on P&D related service delivery through LHWs in your district?

Probes:

- What were the faced challenges? And how they were mitigated?
- What adjustments were made to the changing context and how the interventions were re-aligned during 2020-21 with regards to COVID-19 scenario?

9. What are your suggestions to improve P&D related services?

End-term Evaluation of P&D Project
INTERVIEW GUIDE FOR SUPPLY CHAIN MANAGEMENT PARTNER

Before starting interview, remember to:

- ⇒ Introduce yourself and explain purpose of visit
- ⇒ Get formal consent for the interview and provide brief of evaluation objectives
- ⇒ Ask for permission for audio recording of the interview

INTERVIEW DETAILS
Name of the SCM Partner Representative:
Designation:
Gender:
City/Province:
Contact No:
Name of Moderator:
Name of Note Taker:
Date of Interview:

1. With reference to efforts of UNICEF's P&D project, please share how has the P&D related supply chain management system strengthened in Sindh and Punjab? What has been Chemonics's role?
Probe:
 - What are the key issues?
 - What are the key changes done to strengthen the existing system/process?
 - Has UNICEF P&D project provided any support to Government in strengthening of comprehensive supply chain management system involving different programs and their linkage with DHIS?

2. Can you explain how the development and implementation of integrated digital HLMIS in Punjab and Sindh has been rolled out?
Probes:
 - How has the upgraded DHIS been integrated with LMIS?
 - How have the government and stakeholders provided support to endorse the upgraded DHIS and its integration with LMIS? Has UNICEF provided any support?
 - Have all the P&D commodities been added to the updated EML?
 - What resources were required for this purpose? Who provided the support (probe for UNICEF)?
 - Any challenge faced during implementation?

3. How is Chemonics ensuring linkages of DHIS2 with LMIS in Punjab and Sindh?

Probes:

- Are the linkages inclusive of qualification and forecasting to end users?
- Is UNICEF providing technical assistance in warehousing and distribution to end user and tracking?

4. Has the HLMIS software successfully piloted and scaled up in health facilities? In how many facilities, when and where?

Probes:

- Who supported this intervention? (Probe for UNICEF's role)
- What were the main challenges encountered?
- Do you have any risk mitigation strategy?

5. Was any orientation provided on integrated digital HLMIS and DHIS2 in Punjab and Sindh?

Probes:

- What is the status of these trainings? (Planned vs actually conducted)
- How many trainings were held and number of staff was trained? At which level (e.g., facility, HCP)?
- Any challenge faced in conducting these orientations/trainings?

6. In your opinion, did integrated digital HLMIS contributed in any way towards averting the P&D related morbidity and mortality?

7. How do you see the effects of Covid-19 on implementation of project activities?

- What were faced challenges and how were they mitigated?

8. Do you think the new system is aligned well with the health sector's strategic plans as well as the UHC framework?

End-term Evaluation of P&D Project
INTERVIEW GUIDE FOR CSG MEMBER

Before starting interview, remember to:

- ⇒ Introduce yourself and explain purpose of visit
- ⇒ Get formal consent for the interview and provide brief of study objectives
- ⇒ Ask for permission for audio recording of the interview

INTERVIEW DETAILS
Name of the CSG Member:
Designation:
Gender:
Province:
Contact No:
Name of Moderator:
Name of Note Taker:
Date of Interview:

1. What are Government's priorities for childhood illnesses?
 - How do you describe the focus on morbidity and mortality associated with childhood pneumonia and diarrhea?

2. What is the role of CSG established under UNICEF's P&D project?

Probes:

 - Have specific TORs developed for the CSG? What is your opinion about key responsibilities of the CSG?
 - What is the composition of CSG? Any change/addition during the project period (2016-2021)?
 - How frequently CSG meetings are held? How was the participation?

3. In your opinion, has UNICEF's P&D project supported government efforts in managing P&D? if yes can you please explain in what ways?
 - Were project objectives aligned with global recommendations (GAPPD) and provincial policies?
 - Capacity building, policy formulation, evidence base decision making, joint accountability framework, activities level

4. What are the key achievements of Child Survival Group with regards to management of P&D, (e.g., updating of IMNCI guidelines, EML, MSDP/EPHS)?

Probes:

- What is your opinion about these interventions under P&D Project and their appropriateness for child survival?
 - How do you envisage P&D Project's contribution in improving child survival, specifically for children from marginalized, poor and vulnerable segments of the society as well as from low-income and rural areas?
5. Are there any areas where actions have not been taken on decisions of CSG? Can you share any example? What were these issues?
6. Do you believe that CSG forum has been able to achieve its objectives as per TORs?
Probe:
- How has CSG contributed in improving under-5 child survival? Any specific contribution in improving pneumonia and diarrhea services?
7. What have been the major challenges and drivers in achieving these objectives?
Probe:
- Can you provide any example of any facilitators and barriers?
 - How do you see the effects of Covid-19 on implementation of project activities? What were faced challenges and how were they mitigated?
8. In your opinion, how can CSG contribute in a more effective manner in improving pneumonia and diarrhea services in future? What is the plan for its sustainability beyond project life (support from UNICEF)?
- How CSG like forums can be institutionalized so that they can work beyond the project's support?
9. How do you see the contribution of UNICEF P&D project in improving management of pneumonia and diarrhea? Any suggestions for replication and scaling of their project interventions?
10. Do you know about any awareness campaign about management and treatment of childhood pneumonia and diarrhea?
- What were the mediums used?
 - In your opinion, how effective is social media platform for reaching out to sensitize community and government officials in your area to advocate and raise awareness

End-term Evaluation of P&D Project
INTERVIEW GUIDE FOR TERTIARY LEVEL CARE PROVIDER

Before starting interview, remember to:

- ⇒ Introduce yourself and explain purpose of visit
- ⇒ Get formal consent for the interview and provide brief of evaluation objectives
- ⇒ Ask for permission for audio recording of the interview

INTERVIEW DETAILS
Name:
Designation:
Health Facility/Hospital:
Province:
Gender:
Name of Moderator:
Name of Note Taker:
Date:

1. How do you describe the needs and requirements of the community related to childhood illnesses, particularly related to pneumonia and diarrhea?
 - Comment on the needs catered/not catered by P&D Project?

2. I would like to know about main childhood related illnesses diagnosed in your hospital. Can you please comment on the caseload of Pneumonia and Diarrhea?

Probes:

 - About what proportion of children (less than 5 years) is brought to your hospital that suffer from Pneumonia and Diarrhea?
 - What is your view about the major causes of spread of these diseases and how can this be prevented?
 - What type of treatment approach or professional help is commonly preferred in this geographic area for these diseases (e.g., self-treatment, traditional healer, homeopathic, allopathic – public or private)? Why?
 - Do you think female and male children equally seek treatment for these illnesses? Do you think any disparity exists when parents seek treatment for their daughters and sons?

3. I would like to know about your skills/competence for managing childhood illnesses? Can you please tell us about any training(s) received since you have been practicing for dealing such diseases?

Probes:

- What do you think about in-service trainings for enhancing skill/competence to manage childhood illness, particularly Pneumonia and Diarrhea? Has your staff been given any such training? Refresher follow ups?
 - When was the last time you and your staff received such training? Who provided the training? If no, what could be the reason for not arranging such trainings?
 - In your view, what can be done to improve quality of trainings?
4. Now, I would like to discuss your awareness about protocols and updated guidelines (like IMNCI guidelines) for managing pneumonia and diarrhea in children at your hospital. Are these protocols and guidelines followed?

Probes:

- Can you please explain their usefulness in diagnosing and treating childhood illness?
 - If no such specific guidelines are available, can you please comment on the reasons?
5. We will like to know about the diagnosis and treatment of Pneumonia in your hospital? Please tell us how do you diagnose children suffering from Pneumonia?
- Probes:
- How do you diagnose and classify Pneumonia on the basis of its severity and does its treatment also varies accordingly? Kindly explain.
 - Are you using any new approaches (e.g., RI Timers, Oxygen cylinders and Pulse Oximeters?)
 - Do you think any particular equipment (ARI Timers, Oxygen cylinders and Pulse Oximeters) is essential for the diagnosis of pneumonia? If there is any deficiency, please explain reasons for shortage of equipment.
 - How commonly antibiotics are used for the treatment of pneumonia?
 - Do you think there is any role and advantage of using oxygen in treating pneumonia? Is it being used at your hospital? If not, can you explain the reasons?
 - In your opinion, how deficiencies in equipment can be addressed?
6. Can you please tell us how do you manage children suffering from Diarrhea at your hospital?
- Probes:
- How do you diagnose childhood diarrhea on the basis of severity of illness and do you differentiate it from dysentery?
 - What options do you have to treat childhood diarrhea with oral medications?
 - Is there any role of oral Zinc and low Osmolarity ORS in its treatment? If so, what type of Zinc formulation do you usually prescribe?
 - Do you think there is any advantage of using Low Osmolarity ORS compared to regular ORS in treating Diarrhea?
 - What do you think is the reason for their acceptability/ non-acceptability?
 - Are you using any new commodities (e.g., oral Zinc and low Osmolarity ORS)? Do you have new commodities like Zinc DT and Low Osmolarity ORS in your hospital? If not, why?
 - If yes, do you prefer prescribing new commodities like Zinc DT and LO ORS over the other ones?
 - Do you think there is a difference in results in recovery process using new commodities as compared to using syrup and regular ORS?
 - In your opinion, what is the beneficiaries' reaction to using dispersible tablets and LO ORS? Do you think they are acceptable?
7. What is availability status of commodities related to management of pneumonia and diarrhea?
- Was availability affected as a result of Covid-19?
8. Now, I would like you to comment on the cost of treating Pneumonia and Diarrhea?

- In your opinion, does cost play a significant influence over the choice of medicines prescribed and service provider?
 - If you are prescribing new commodities, do you think there has been any change in cost of treatment per patient?
 - How commonly do you prescribe medicines related to the treatment of Pneumonia and Diarrhea to be bought from market in case of its stock-out?
9. In your opinion what should be done to improve the quality of pneumonia and diarrhea services at your hospital and in general?

End-term Evaluation of P&D Project
INTERVIEW GUIDE FOR IN-CHARGE OF HEALTH FACILITY

Before starting interview, remember to:

- ⇒ Introduce yourself and explain purpose of visit
- ⇒ Get formal consent for the interview and provide brief of evaluation objectives
- ⇒ Ask for permission for audio recording of the interview

FACILITY IDENTIFICATION
Name of the In-charge:
Gender:
Name of the facility:
District:
Contact No:
Name of Moderator:
Name of Note Taker:
Date:

1. I would like to know about main childhood related illnesses in the catchment area of your facility. Can you please comment on the caseload of Pneumonia and Diarrhea?

Probes:

- About what proportion of children (less than 5 years) is brought to your health facility that suffer from Pneumonia and Diarrhea?
 - Can you compare case load before and after COVID-19?
 - Is your facility catering to the needs and requirements of your community related to P&D?
- What is your view about the major causes of spread of these diseases in your community and how can this be prevented?
- What type of treatment approach or professional help is commonly preferred in the community for these diseases (e.g., self-treatment, traditional healer, homeopathic, allopathic – public or private)?
- Do you think female and male children equally seek treatment for these illnesses? Do you think any disparity exists when parents seek treatment for their daughters and sons?
- Has COVID-19 pandemic effected the service delivery?

2. I would like to know about the skill/competence of the staff at your facility for managing childhood illnesses? Can you please tell us about any training(s) received during the service for dealing such diseases?

Probes:

- What in your view is the importance and benefits of in-service trainings for enhancing skill/competence to manage childhood illness, particularly Pneumonia and Diarrhea?
 - When was the last time you or any of your staff member received such training? If no, what could be the reason for not arranging such trainings?
 - Who usually arrange such trainings (like Health Department, development partners e.g., UNICEF, WHO or pharmaceutical companies)?
 - Are these trainings conducted at the facility or some outside venue? What is your preference for the venue of such trainings and why?
 - What deficiencies did you notice in these trainings? In your view, how can these be improved?
 - If you have received training, did any refresher follow it? If no, what could be the reason for not providing refresher training?
3. Now, I would like to know about the use of protocols and guidelines (like IMNCI guidelines) for managing pneumonia and diarrhea in children at your facility. What are these protocols and guidelines, kindly explain?
- Probes:
- Can you please explain their usefulness in diagnosing and treating childhood illness?
 - If no such specific protocols/guidelines are available, can you please comment on the reasons?
4. Now, we will like to know about the diagnosis of Pneumonia at your facility? Please tell us how do you diagnose children suffering from Pneumonia?
- Probes:
- How do you diagnose and classify Pneumonia on the basis of its severity and does its treatment also vary accordingly? Kindly explain.
 - Do you think any particular equipment is essential for the diagnosis of pneumonia? If there is any deficiency, please explain reasons for shortage of equipment.
 - Does your facility use oxygen, pulse oximeters and ARI timers for the diagnosis and treatment of Pneumonia? Are they available in sufficient amount for the use of staff according to the need and case load?
 - Are there any suggestions for improving the diagnosis of Pneumonia at your facility?
5. Can you please tell us how do you manage children suffering from Pneumonia at your facility?
- Probes:
- How commonly antibiotics are used for treatment of Pneumonia? Probe for Amoxicillin
 - Have you heard of any dispersible (soluble in water) antibiotic tablet? If so, do you perceive any advantage of dispersible tablets over syrups?
6. Can you please tell us how do you manage childhood diarrhea at your facility?
- Probes:
- How do you diagnose childhood diarrhea?
 - What options do you have to treat childhood diarrhea with oral medications?
 - Is there any role of oral Zinc in management of childhood diarrhea? If so, what type of Zinc formulation is usually provided at your facility?
 - Have you ever heard of any dispersible (soluble in water) tablets of Zinc? If so, do you perceive any advantage of dispersible tablets over syrups?
 - Do you have new commodities like dispersible tablet of Zinc in your facility?
7. In your opinion, what is the perception of the community regarding use of dispersible tablets?

Probes:

- In your opinion, what is the community's reaction to using dispersible tablets?
- What do you think is the reason for their acceptability/ non-acceptability?
- Do you think there is a difference in results in recovery process using new commodities as compared to using syrup?

8. Do you think there is any role and advantage of using oxygen in treating pneumonia?

Probes:

- Is it being used at your facility?
- If not, can you explain the reasons?

9. Is your facility provided with Low Osmolarity ORS? If no, please state reasons?

Probes:

- Do you think there is any advantage of using Low Osmolarity ORS compared to regular ORS in treating Diarrhea?
- Do you have new commodities like Low Osmolarity ORS in your facility?
- Do you think there is a difference in results in recovery process using new commodities as compared to regular ORS?

10. Please tell us about any stock-out of aforementioned medicines that are used for treating Pneumonia and Diarrhea, particularly in context of COVID-19 pandemic?

Probes:

- How common are these stock-outs?
- Did COVID-19 effect the availability and supply of these commodities?
- Which medicines does your facility run out of most frequently?
- What about the adequacy of new commodities like Zinc DT and Low Osmolarity ORS?
- How do you treat these children, when there is stock-out of medicines at the facility?
- In your opinion, what are the reasons for these stock-outs?
- What do you suggest for ensuring uninterrupted supply of these medicines and commodities?

11. Now, we would like to know about the process of forecasting and quantification of medicines and supplies at your facility?

Probes:

- Is it based on burden of disease in your catchment area?
- Is it based on data from DHIS?
- Are the supplies provided according to the demands submitted and they are need based? If no, kindly explain reasons for under-supply.
- Kindly comment on whether the supply of new commodities like Zinc DT and Low Osmolarity ORS is according to the generated demand?
- Have you or other staff member received any training on forecasting and quantification of medicines and supplies?
- How do you report low stock and how effective concerned staff are in replenishing stock in time?
- What do you suggest for improving the process of forecasting and quantification to overcome stock-outs?

12. In your opinion, how effective is DHIS in context of management of children suffering from Pneumonia and Diarrhea?

Probes:

- Are you aware about the inclusion of Pneumonia and Diarrhea indicators in DHIS?
- Are the DHIS reporting tools on facility level data updated with indicators on recommended commodities as per the revised IMNCl guidelines?
- Are you satisfied with the quality (accuracy of information, completeness and timeliness) of DHIS recording and reporting? If not, how can it be improved?
- Do these reports provide adequate cover and indicate the shortage of commodities? If no, what are other reporting mechanisms?
- Have you made any decisions regarding management of pneumonia and diarrhea on the basis of the reports generated at district level? If yes, kindly give some examples?
- Does DHIS help keeping the record of referrals made in complicated cases?

13. Can you comment on the capacities of your staff on using DHIS tools? If there are any gaps, how can these be addressed?

Probes:

- Does the facility staff feel any difficulty in using the tools?
- Are you aware about any capacity building initiatives taken for rolling out DHIS and DHIS2 implementation in your district?
- Did you take part in any of such trainings? Probe for UNICEF's role?
- In your opinion, is there a requirement for further such trainings?

14. Now, coming to the role of community health workers in management of Pneumonia and Diarrhea, particularly Lady Health Workers (LHWs) and Community Midwives (CMWs), what is their importance in reducing morbidity and mortality associated with these diseases?

Probes:

- Is there any network of these workers associated with your facility?
- Are these workers fully equipped and have been provided with sufficient supplies to perform their role in management of these illness?
- Have they received any training (like IMNCl community component) on management of these illnesses?
- In your opinion are they sufficiently equipped with new commodities like ARI timers, Zinc DT and Low Osmolarity ORS?
- In your opinion are they active in creating awareness among communities and managing P&D cases effectively in their relevant areas?
- In your opinion, how can the role of community health workers be further strengthened in management of Pneumonia and Diarrhea?

15. I want to know, if you have established any liaison with any higher-level health facilities for referral?

Probes:

- In case of complications, what referral mechanisms exist for transferring these children to higher-level health facilities?
- Do you have linkages with higher level facilities? (e.g., THQH, DHQH & tertiary care hospital)
- What is reported experience of patients referred to these facilities? Do they generally receive supportive and considerate treatment? Give some examples.
- Do you keep record of referrals and feedbacks?

16. Are there any media campaigns, including social media, to raise awareness on childhood pneumonia and diarrhea in your area? If yes, how useful were these awareness campaigns?

Probes:

- Have you seen any material/content used to create awareness about P&D? if yes please tell us if you were given any material in this regards to show in your facility?
- What can be further done to improve awareness of local community on P&D?

17. I'd now like to ask you to summarize your role in the provision of pneumonia and diarrhea services? What else do you think you need to improve the quality of pneumonia and diarrhea services at community level?

Probes:

- What are the main implementation challenges for P&D related service delivery?
- Was there any effect of COVID-19 on P&D related service delivery? What were the faced challenges? And how they were mitigated?
- What adjustments were made to the changing context and how the interventions were re-aligned during 2020-21 with regards to COVID-19 scenario?
- What must be done to improve the quality of pneumonia and diarrhea services at PHC level?

End-term Evaluation of P&D Project
FGD GUIDE FOR GENERAL PRACTITIONERS

Before starting interview, remember to:

- ⇒ Introduce yourself and explain purpose of visit
- ⇒ Get formal consent for the FGD and provide brief of study objectives
- ⇒ Ask for permission for audio recording of the FGD

FGD DETAILS
Name of District:
Number of Participants: _____ Males _____ Females
Name of Moderator:
Name of Note Taker:
Date:
<p>During the initial discussion to explain the study, the interviewer and participant should have had the opportunity to introduce themselves and to make small talk to break the ice. You can begin by saying these words to the group of participants:</p> <p>‘As you know pneumonia and diarrhea are common causes of deaths among children under age 5. We are conducting an evaluation to learn about of services being provided by LHWs and LHSs to prevent and control these diseases among children and would like to know your views in this regard. We will start when you are ready, will listen to your view points and ask few questions to clarify some of the things you would talk about.’ May we begin?</p> <p>The guideline contains multiple questions and each question is followed by a set of probes. Please let participants initiate the discussion and use probes only when certain concerns are not addressed by the group.</p>

1. I would like to know about main childhood related illnesses and their treatment approach in your catchment area. Can you please comment on the caseload of pneumonia and diarrhea?

Probes:

- About what proportion of children (less than 5 years) is brought to your clinic that suffer from Pneumonia and Diarrhea?
 - Can you compare case load before and after COVID-19?
- What is your view about the major causes of spread of these diseases in your community and how can this be prevented?
- What type of treatment approach or professional help is commonly preferred in the community for these diseases (e.g., self-treatment, traditional healer, homeopathic, allopathic – public or private)?

- Do you think female and male children equally seek treatment for these illnesses? Do you think any disparity exists when parents seek treatment for their daughters and sons?
- Has COVID-19 pandemic effected the service delivery through your clinic?

2. I would like to know about your skills/competence for managing childhood illnesses? Can you please tell us about any training(s) received since you have been practicing for dealing these diseases?

Probes:

- What do you think about in-service trainings for enhancing skill/competence to manage childhood illness, particularly pneumonia and diarrhea? What is your opinion on refresher and follow ups?
- When was the last time you received such training? Who provided the training (probe for UNICEF)? If no, what could be the reason for not arranging such trainings?
- In your view, what can be done to improve quality of trainings?

3. Now, I would like to know about your knowledge about protocols and guidelines (like IMNCI guidelines) for managing pneumonia and diarrhea in children at your clinic.

Probes:

- Can you please explain their usefulness in diagnosing and treating childhood illness?
- Are these protocols and guidelines followed?
- If no such specific protocols/guidelines are available and being implemented, can you please comment on the reasons?

4. Now, we will like to know about the diagnosis of Pneumonia at your clinic? Please tell us how do you diagnose children suffering from Pneumonia?

Probes:

- How do you diagnose and classify Pneumonia on the basis of its severity and does its treatment also varies accordingly? Kindly explain.
- Are you using any new approaches (e.g., ARI Timers, Oxygen cylinders and Pulse Oximeters?)
- Do you think any particular equipment (ARI Timers, Oxygen cylinders and Pulse Oximeters) is essential for the diagnosis and management of pneumonia? If there is any deficiency, please explain reasons for shortage of equipment.
- How commonly antibiotics are used for the treatment of pneumonia?
- In your opinion, what is the beneficiaries' reaction to using dispersible tablets? Do you think they are acceptable?
- Do you think there is any role and advantage of using oxygen in treating pneumonia? Is it being used at your clinic? If not, can you explain the reasons?
- In your opinion, how deficiencies in equipment can be addressed?

5. Can you please tell us how do you manage children suffering from Diarrhea at your clinic?

Probes:

- How do you diagnose childhood diarrhea on the basis of severity of illness and do you differentiate it from dysentery?
- What options do you have to treat childhood diarrhea with oral medications?
- Is there any role of oral Zinc and low Osmolarity ORS in its treatment? If so, what type of Zinc formulation do you usually prescribe?
- Do you think there is any advantage of using Low Osmolarity ORS compared to regular ORS in treating Diarrhea?
- Do you have new commodities like Zinc DT and Low Osmolarity ORS in your clinic? If not why

- Do you think there is a difference in results in recovery process using new commodities as compared to using syrup and regular ORS?
- In your opinion, what is the beneficiaries' reaction to using LO ORS? Do you think they are acceptable?

6. Now, I would like you to comment on the cost of treating pneumonia and diarrhea?

Probes:

- In your opinion, does cost play a significant influence over the choice of medicines prescribed and service provider?
- If you are prescribing new commodities, do you think there has been any change in cost of treatment per patient?

7. In your opinion what efforts have been made to improve the quality of pneumonia and diarrhea services within the community?

Probes:

- Particularly in reference to UNICEF P&D project initiatives e.g., revision of IMNCI guidelines, inclusion of P&D indicators in DHIS, use of updated commodities (Amoxicillin and Zinc DT, Lo-ORS) and innovative approaches like ARI Timers, Oxygen, Pulse Oximeters in management of P&D
- What are the lessons learnt from your practice of managing pneumonia and diarrhea in children?
- What are your suggestions for improving the management of these illnesses?

8. Are there any media campaigns, including social media, to raise awareness on childhood pneumonia and diarrhea in your area? If yes, how useful were these awareness campaigns?

Probes:

- Have you seen any material/content used to create awareness about P&D? if yes please tell us if you were given any material in this regards to show in your facility?
- What can be further done to improve awareness of local community on P&D?

9. What are your suggestions to further improve P&D related services?

Probe:

- What are lessons learnt from recent experiences of managing childhood pneumonia and diarrhea?

End-term Evaluation of P&D Project
FGD GUIDE FOR PHARMACY/MEDICAL STORE IN-CHARGES

Before starting interview, remember to:

- ⇒ Introduce yourself and explain purpose of visit
- ⇒ Get formal consent for the FGD and provide brief of evaluation objectives
- ⇒ Ask for permission for audio recording of the FGD

FGD DETAILS
Name of District:
Number of Participants: _____Males _____Females
Name of Moderator:
Name of Note Taker:
Date:
<p>During the initial discussion to explain the study, the interviewer and participant should have had the opportunity to introduce themselves and to make small talk to break the ice. You can begin by saying these words to the group of participants:</p> <p>'As you know pneumonia and diarrhea are common causes of deaths among children under age 5. We are conducting an evaluation to learn about of prescribing behaviors regarding commodities used for Pneumonia and Diarrhea among children and would like to know your views in this regard. We will start when you are ready, will listen to your view points and ask few questions to clarify some of the things you would talk about.' May we begin?</p> <p>The guideline contains multiple questions and each question is followed by a set of probes. Please let participants initiate the discussion and use probes only when certain concerns are not addressed by the group.</p>

1. Which drugs are most commonly prescribed by clinicians (Specialists/ General Practitioners) for the treatment of pneumonia in children in your catchment area?

Probes:

- Do you mostly receive prescription of Amoxicillin?
- If yes how frequently and by whom?
- Do you find any difference in prescribing pattern of Specialists and GPs? If yes, please elaborate.
- In your opinion, what are the main considerations of doctors to prescribe these drugs?

2. Which drugs are most commonly prescribed by clinicians (Specialists/ General Practitioners) for the treatment of diarrhea in children in your catchment area?

Probes:

- Do you receive prescription of Zinc for children suffering from diarrhea?

- If yes how frequently and by whom? GP or Specialist? Is there any variation between GP and Specialists?
- How frequently do you receive prescription of Low Osmolarity for children suffering from diarrhea? Is there any variation between GP and Specialists?

3. Are medicines like Amoxicillin and Zinc available in syrup as well as dispersible tablet form in your pharmacy/medical store?

Probes:

- Which in your experience the clients/patients prefer and why so?
 - What is the level of acceptability of dispersible tablets and Lo-ORS in your community? If acceptance is low, what are the main concerns e.g., cost, social belief, taste etc.?
 - What is the source for dispersible tablets, if available?
 - Are dispersible tablets being locally manufactured in Pakistan? Probe for names of pharmaceuticals.
4. Do you have amoxicillin and zinc in dispersible tablets (DT) formulation in stock for sale? If not, why not? If yes, why?

Probes:

- Will you like to keep Amoxicillin and Zinc Dispersible Tablets in your pharmacy?
 - Are these sufficiently availability according to the needs of the community?
 - Is the supply of these medicines regular or intermittent? What are the reasons for delay, if any, particularly with reference to COVID-19 pandemic?
 - In your opinion, which marketing strategy is more likely to promote demand and sale of these drugs?
5. Is there any difference in usage and demand of prescribed medicines for P&D among marginalized/poor community due to cost and availability?

Probe:

- How much does DTs and syrups of Amoxicillin and Zinc cost?

6. What is the distribution of P&D related prescriptions you receive from health facilities (private and public)?

Probe:

- Prescriptions for which medicines are mostly received from public versus private sector?

7. In your opinion what should be done to improve the quality of pneumonia and diarrhea services within the community?

Probes:

- What are the lessons learnt from your experience of dispensing pneumonia and diarrhea related commodities, particularly regarding use of dispersible tablets?
- Any suggestions for improving utilization of P&D related commodities?

End-term Evaluation of P&D Project
FGD GUIDE FOR LHWs

Before starting interview, remember to:

- ⇒ Introduce yourself and explain purpose of visit
- ⇒ Get formal consent for the FGD and provide brief of evaluation objectives
- ⇒ Ask for permission for audio recording of the FGD

FGD DETAILS
Name of District:
Number of Participants:
Name of Moderator:
Name of Note Taker:
Date:
<p>During the initial discussion to explain the study, the interviewer and participant should have had the opportunity to introduce themselves and to make small talk to break the ice. You can begin by saying these words to the group of participants:</p> <p>'As you know pneumonia and diarrhea are common causes of deaths among children under age 5. We are conducting an evaluation to learn about of services being provided by you to prevent and control these diseases among children and would like to know your views in this regard. We will start when you are ready, will listen to your view points and ask few questions to clarify some of the things you would talk about.' May we begin?</p> <p>The guideline contains multiple questions and each question is followed by a set of probes. Please let participants initiate the discussion and use probes only when certain concerns are not addressed by the group.</p>

Disease burden or cases of pneumonia and diarrhea

1. I would like to know about your own views and perceptions about estimated number of cases of pneumonia and diarrhea in your catchment community?

Probes:

- Average cases of pneumonia and diarrhea LHWs dealt daily/weekly/monthly.
 - Can you compare case load before and after COVID-19?
- Do you get sufficient time to deal with pneumonia & diarrhea cases, in addition to your other responsibilities?
 - Has COVID-19 pandemic effected the service delivery?

Trainings and skills to handle pneumonia and diarrhea

2. In your opinion, are you trained to handle pneumonia and diarrhea cases?

Probes:

- Have you received induction & on job trainings (e.g., IMNCI) regarding pneumonia and diarrhea? Who provided these trainings (probe for UNICEF)?
- When did you receive last training/refresher?
- Did these trainings help you in catering to the needs and requirements of your catchment community? If yes, how. If not, why not? Any suggestions for further improvement?

Availability of treatment protocols/guidelines

3. Do you have IMNCI treatment and referral guidelines for pneumonia and diarrhea in the form of charts, posters or booklets?

Probes:

- Did you receive any pictorial and/or audio-visual material related to pneumonia and diarrhea?
- Do you use these materials for awareness raising of the community, especially mothers of children under 5 years? if not why?

Awareness of community

4. Are there any media campaigns, including social media, to raise awareness on childhood pneumonia and diarrhea in your area?

Probes:

- What in your opinion, how useful were these awareness campaigns?
- What can be further done to improve awareness of local community on P&D?

Availability of sufficient supplies for management of pneumonia and diarrhea

5. Do you have sufficient medicines and supplies for management of pneumonia and diarrhea? If not why?

Probes:

- Amoxicillin, antipyretic, zinc, LORS, ARI timer, thermometer, dispersible tablets
- What do you think about the effectiveness of use of ARI Timers and pulse oximeters in management of Pneumonia and Diarrhea in your catchment community?
- Is there acceptance of updated commodities e.g., Dispersible Tablets in your catchment area? If no, what are the concerns?

Case management of pneumonia and diarrhea

6. How comfortable do you feel in handling a case of pneumonia or diarrhea at your health facility or during home visits?

Probes:

- Can you detect danger signs for referral?
- Have you received any training to detect danger signs of pneumonia and diarrhea?
- Do you know how to classify pneumonia and diarrhea by using WHO/IMNCI guidelines? How frequently do you use these guidelines?
- Do you have knowledge of any home remedies commonly used? are they effective?

Challenges in case handling

7. What challenges do you face while managing pneumonia & diarrhea cases in the community, particularly in COVID-19 scenario?

Probes:

- Do you face any challenge with respect to your skill and knowledge, and feel the need for more training?
- Do you face any challenges from the community in managing P&D cases?
- Do you face gaps in sufficient supplies and equipment according to the need?
- Do you suffer from lack of self- motivation? If yes, why?

Health facility liaison and referral support

8. Have you established any liaison with any public health facilities for referral? How does health facility staff generally deal with your referred cases of severe pneumonia and diarrhea?

Probes:

- Do you have linkages with higher level facilities? (e.g., BHU, RHC, THQH, DHQH & tertiary care hospital)
- What is reported experience of patients referred to these facilities? Do they generally receive supportive and considerate treatment? Give some examples.
- How are patients transported to referral facilities and who pays for transport charges? Do they avail facility or community ambulance services?
- Do you keep record of referrals and feedbacks?

Liaison with other Community Health Workers

9. Do you have any formal or informal liaison with other community health workers, including CMWs, in your catchment area?

Probes:

- Do they belong to NGO or public sector organization?
- Do you consider their role supportive/productive in the management of pneumonia and diarrhea?

Coordination and Monitoring Mechanisms

10. What is the usual coordination and monitoring mechanism of outreach services?

Probes:

- Describe the coordination mechanisms and working relationship between LHWs and LHSs and others?
- Do officials (e.g., DDOH, DHO) usually make informed or surprised monitoring visits?
- Do they provide supportive or traditional supervision? Do you get appreciation for good work?

Case reporting and documentation

11. How pneumonia and diarrhea cases are routinely recorded and reported?

Probes:

- What is the frequency of reporting?
- Where these reports are sent? Are they entered in DHIS? Are you aware about the revised P&D indicators?
- Do you receive feedback from health authorities?
- Do health authorities use your data for managing supplies and improving quality of services?

Social beliefs and taboos

12. What is the general level of awareness about health issues among the local community?

Probes:

- Do you feel cultural beliefs and practices could be one reason for not seeking proper treatment for pneumonia and diarrhea? If yes, please explain.
- Are there taboos regarding diet for children suffering from diarrhea and pneumonia? If yes, give examples.

LHWs as agent of change

13. What is your experience as agents of change?

Probes:

- What in your opinion is your contributions to other sectors?
- Do the community respect you for your role and services?

Recommendations and lessons learnt

14. What are your suggestions to improve P&D related services?

Probe:

- What are lessons learnt from recent experiences of managing childhood pneumonia and diarrhea?

End-term Evaluation of P&D Project
FGD GUIDE FOR MOTHERS OR FEMALE CARE GIVERS

Before starting interview, remember to:

- ⇒ Introduce yourself and explain purpose of visit
- ⇒ Get formal consent for the FGD and provide brief of evaluation objectives
- ⇒ Ask for permission for audio recording of the FGD

FGD DETAILS
Name of District:
Number of Participants:
Name of Moderator:
Name of Note Taker:
Date:
<p>During the initial discussion to explain the study, the interviewer and participant should have had the opportunity to introduce themselves and to make small talk to break the ice. You can begin by saying these words to the group of participants:</p> <p>'As you know pneumonia and diarrhea are common causes of deaths among children under age 5. We are conducting an evaluation to learn about of services being provided LHWs and LHSs to prevent and control these diseases among children and would like to know your views in this regard. We will start when you are ready, will listen to your view points and ask few questions to clarify some of the things you would talk about.' May we begin?</p> <p>The guideline contains multiple questions and each question is followed by a set of probes. Please let participants initiate the discussion and use probes only when certain concerns are not addressed by the group.</p>

1. Where do most people prefer to go to seek treatment of children? What degree of influence do you think the cultural and family norms and beliefs have over the choice of treatment?

Probes:

- Do you use a doctor or traditional/spiritual healer for child illness?
- What cultural beliefs influence child illness and treatment seeking in this community?
- Do you go to the health center for child illness? What is your opinion about the quality of the services provided by the health center?
- Do you directly go to the chemist for your child illness?
- Why do you use the chemist (instead of the health facility)?

2. What causes diarrhea and pneumonia, what are the symptoms and what measures can prevent the spread of the pneumonia and diseases?

Probes:

- In your opinion, which preventive measures and/or habits can prevent spread of pneumonia or diarrheal diseases?
 - Do you undertake these actions for your child/children?
 - Where does your family get water from? Do you drink it directly from the source?
 - Where does your family (adults and children) go to the toilet? Does your family wash their hands?
3. What is the preferred treatment by health care providers in your area for Pneumonia and Diarrhea? and what is your treatment of choice for these illnesses?

Probes:

- Do you prefer to visit public health facility, local GP, home remedies or self-medication or seeking advice from local pharmacies for your child suffering from P&D?
- Are you aware of use of antibiotics (dispersible tablets of Amoxicillin), zinc, L-ORS, ARI timer, and Pulse Oximeter? Have any of these been used for treating your child?
- What do you think about the effectiveness of use of ARI Timers and pulse oximeters in management of Pneumonia and Diarrhea in your catchment community?
- Is there acceptance of updated commodities e.g., Dispersible Tablets in your catchment area? If no, what are the concerns?

4. From where have you learnt about childhood illnesses? Probe for awareness campaigns?

Probes:

- What child survival information, education and communication activities are targeted at mothers/fathers? What are the major sources of such information?
- What measures should be taken to improve the community's knowledge about child illness?
- Are you aware of any media campaign to raise awareness on pneumonia and diarrhea? if yes then ask for the methods and source?
- Did you find those material/messages useful/helpful? Please explain How
- What can be further done to improve awareness of local community on P&D?
- Do you feel cultural beliefs and practices play an important part in health seeking behaviors for proper treatment of pneumonia and diarrhea? If yes, please explain.
- Are there any taboos regarding diet for children suffering from diarrhea and pneumonia? If yes, give examples.

5. What activities do health workers (LHWs) undertake in the community regarding diarrhea and pneumonia?

Probes:

- Are they providing sufficient care for diarrhea and pneumonia?
- Do they use any innovative approaches like ARI timers, pulse oximeters and Dispersible Tablets for management of P&D?
- How can their services be improved?

6. What are the main challenges you face in going to the health center or accessing treatment for children suffering from pneumonia and diarrhea, particularly with reference to COVID-19 pandemic?

Probes:

- Shortage of P&D commodities and medicines? how frequent and will they be available
- Does the cost of accessing treatment sometimes prevent some families from taking the child to the facility for healthcare services?

- What do you say about the overall quality of services?
 - During Covid-19?
7. What are the solutions to challenges/barriers in your opinion? What can be done to improve the health of children in this area? Particularly probe with reference to COVID-19.

End-term Evaluation of P&D Project
HEALTH FACILITY CHECKLIST
(To be transformed into CAPI using CSPro)

FACILITY IDENTIFICATION	
Name of Province:	
Name of District:	
Name of Health Facility:	
Type of Health Facility:	
Name of Facility In-charge:	
Contact Number of Facility In-charge:	
Name of Data Collector:	
Date of Visit:	
Form Verified By (Data Collection Team Lead):	

AVAILABILITY OF MEDICINE IN STOCK				
Serial No.	Name of Medicine	Availability (Mark ✓ for Yes or No)		Remarks
		Yes	No	
1.	Amoxicillin Syrup (125 mg)			
2.	Amoxicillin Syrup (250 mg)			
3.	Amoxicillin Dispersible Tablets (DT)			
4.	Syrup Zinc Sulphate			
5.	Zinc Dispersible Tablets (DT)			
	Low Osmolality ORS			
6.	ORS			
7.	0.45% Normal Saline/Dextrose Saline			
8.	Ringers Lactate Solution			
9.	Inj. Amoxicillin			
10.	Bronchodilator			
11.	Inj. Diazepam			

AVAILABILITY OF P&D COMMODITIES FOR U5 CHILDREN AT HEALTH FACILITIES				
Serial No.	Name of Commodity	Availability (Mark ✓ for Yes or No)		Remarks
		Yes	No	
1.	Oxygen cylinder		No	
2.	Oxygen Flow Meter and Mask			
3.	Pulse Oximeter (Mark No for non-functional)			
4.	ARI Timer (Mark No for non-functional)			
5.	Disposable syringe			
6.	Alcohol swab			
7.	Rectal tube			
8.	NG Tube			

STAFF TRAINING ON IMNCI				
Serial No.	Staff type	IMNCI Training Received (Mark ✓ for Yes or No)		Remarks
		Yes	No	
1.	Doctor (WMO)			
2.	Doctor (MO)			
3.	Nurse			
4.	LHV			
5.	Linked LHWs			
6.	Others (Specify: _____)			

End-term Evaluation of P&D Project
TOOL FOR PRESCRIPTION REVIEW
(To be transformed into CAPI using CSPro)

FACILITY IDENTIFICATION
Name of Province:
Name of District:
Name of Health Facility:
Type of Health Facility:
Name of Facility In-charge:
Contact Number of Facility In-charge:
Name of Data Collector:
Date of Visit:
Form Verified By (Data Collection Team Lead):

PATIENT IDENTIFICATION	
Age of Child: Year ____ Months ____	Gender: Male ____ Female ____
Provisional Diagnosis:	
Diarrhea: <ol style="list-style-type: none"> 1. Not classified 2. Severe dehydration 3. Some dehydration 4. No dehydration 5. Severe persistent diarrhea 6. Persistent diarrhea 7. Dysentery 	
Pneumonia/ARI: <ol style="list-style-type: none"> 1. Not classified 2. No pneumonia (cough or cold) 3. Pneumonia 	

4. Severe pneumonia/disease

PRESCRIPTION FOR PNEUMONIA				
Drug	Formulation	Dose/Strength	Frequency	Duration
Amoxicillin				
Bronchodilator				
Other (Specify)	_____			
* Formulations include Syrup, DT, Sachet, Injection or Tablet. For bronchodilator, formulations include oral, inhaler or injectable.				

PRESCRIPTION FOR DIARRHEA				
Drug	Formulation*	Dose/Strength	Frequency	Duration
Zinc Sulphate				
ORS				
Ciprofloxacin				
0.45% Normal Saline/Dextrose Saline				
Ringers Lactate Solution				
Other (Specify)	_____			
* Formulations include Syrup, DT, Sachet, Injection, Drip or Tablet and for ORS Low Osmolarity or Regular.				



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