DFATD: Improving Treatment of Childhood Diarrhoea and Pneumonia: A proposal to scale up coverage of ORS, Zinc and Amoxicillin

External Evaluation Report

Report Prepared by Ipsos Kenya
Presented on: 29th September 2016.
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<th>Description</th>
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</thead>
<tbody>
<tr>
<td>ADDOs</td>
<td>Accredited Drug Dispensing Outlets</td>
</tr>
<tr>
<td>Amox DT</td>
<td>Amoxicillin Dispersible Tablet</td>
</tr>
<tr>
<td>APR</td>
<td>A Promise Renewed</td>
</tr>
<tr>
<td>ARI</td>
<td>Acute Respiratory Infection</td>
</tr>
<tr>
<td>ASAL</td>
<td>Arid and Semi-Arid Lands</td>
</tr>
<tr>
<td>CAPI</td>
<td>Computer Aided Personalized Interview</td>
</tr>
<tr>
<td>CHAI</td>
<td>Clinton Health Access Initiative</td>
</tr>
<tr>
<td>CHMTs</td>
<td>County Health Management Teams</td>
</tr>
<tr>
<td>CI/IHSS</td>
<td>Catalytic Initiative/ Integrated Health Systems Strengthening</td>
</tr>
<tr>
<td>CHEV</td>
<td>Community Health Extension Worker</td>
</tr>
<tr>
<td>CHS</td>
<td>Community Health Strategy</td>
</tr>
<tr>
<td>CHW</td>
<td>Community Health Worker</td>
</tr>
<tr>
<td>CHV</td>
<td>Community Health Volunteer</td>
</tr>
<tr>
<td>C4D</td>
<td>Communication for Development</td>
</tr>
<tr>
<td>DFATD</td>
<td>Department of Foreign Affairs, Trade and Development Canada</td>
</tr>
<tr>
<td>DPI</td>
<td>Data Processing Instructions</td>
</tr>
<tr>
<td>EBC</td>
<td>Ethiopia Broadcasting Corporation</td>
</tr>
<tr>
<td>EFPs</td>
<td>Essential Family Practices</td>
</tr>
<tr>
<td>EGPAF</td>
<td>Elizabeth Glaser Pediatric AIDS Foundation</td>
</tr>
<tr>
<td>ESARO</td>
<td>East and South Africa Regional Office</td>
</tr>
<tr>
<td>FGH</td>
<td>Family Health Guidelines</td>
</tr>
<tr>
<td>FMHACA</td>
<td>Ethiopian Food Medicines, Care Administration and Control Authority</td>
</tr>
<tr>
<td>FMOH</td>
<td>Federal Ministry of Health</td>
</tr>
<tr>
<td>GFATM</td>
<td>The Global Fund to Fight AIDS, Tuberculosis and Malaria</td>
</tr>
<tr>
<td>HDAs</td>
<td>Health Development Army</td>
</tr>
<tr>
<td>HEW</td>
<td>Health Extension Workers</td>
</tr>
<tr>
<td>iCCM</td>
<td>Integrated Community Case Management</td>
</tr>
<tr>
<td>IEC/BCC</td>
<td>Information, Education, Communication/ Behaviour Change Communication</td>
</tr>
<tr>
<td>IMCI</td>
<td>Integrated Management of Childhood Illnesses</td>
</tr>
<tr>
<td>KEMSA</td>
<td>Kenya Medical Supplies Authority</td>
</tr>
<tr>
<td>KFPs</td>
<td>Key Family Practices</td>
</tr>
<tr>
<td>MEDs</td>
<td>Mission for Essential Drugs and Supplies</td>
</tr>
<tr>
<td>MDG</td>
<td>Millennium Development Goal</td>
</tr>
<tr>
<td>MNCH-KAP</td>
<td>Maternal Neonatal Child Health-Knowledge Attitudes and Practices</td>
</tr>
<tr>
<td>MCHIP</td>
<td>Maternal and Child Health Integrated Program</td>
</tr>
<tr>
<td>MOH</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>MoHSW</td>
<td>Ministry of Health and Social Welfare</td>
</tr>
<tr>
<td>MSD</td>
<td>Medical Stores Department</td>
</tr>
<tr>
<td>MSH</td>
<td>Management Sciences for Health</td>
</tr>
<tr>
<td>MNCH-KAP</td>
<td>Maternal Neonatal Child Health-Knowledge Attitudes and Practices</td>
</tr>
<tr>
<td>M&amp;E</td>
<td>Monitoring and Evaluation</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-governmental organization</td>
</tr>
<tr>
<td>NIMR</td>
<td>National Institute for Medical Research</td>
</tr>
<tr>
<td>OECD</td>
<td>The Organization for Economic Cooperation and Development</td>
</tr>
<tr>
<td>ONPPC</td>
<td>National Office of Pharmaceutical and Chemical Products</td>
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<tr>
<td>ORT COrners</td>
<td>Oral Rehydration Therapy corners</td>
</tr>
<tr>
<td>ORS</td>
<td>Oral Rehydration Salts</td>
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<tr>
<td>PSI</td>
<td>Population Services International</td>
</tr>
<tr>
<td>PFSA</td>
<td>Pharmaceuticals Fund and Supply Agency</td>
</tr>
<tr>
<td>RHBs</td>
<td>Regional Health Bureaus</td>
</tr>
<tr>
<td>RMNCH</td>
<td>Reproductive, Maternal, New-born and Child Health</td>
</tr>
<tr>
<td>RDT</td>
<td>Rapid Diagnostic Test</td>
</tr>
<tr>
<td>SD</td>
<td>Supply Division</td>
</tr>
<tr>
<td>SOPs</td>
<td>Standard Operating Procedures</td>
</tr>
<tr>
<td>TDHS</td>
<td>Tanzania Demographic Health Survey</td>
</tr>
<tr>
<td>TFDA</td>
<td>Tanzania Food and Drug Authority</td>
</tr>
<tr>
<td>UNCoLSC</td>
<td>United Nations Commission for Life Saving Commodities for Women and Children</td>
</tr>
<tr>
<td>UNDAF</td>
<td>United Nations Development Assistance Framework</td>
</tr>
<tr>
<td>UNFPA</td>
<td>United Nations Population Fund</td>
</tr>
<tr>
<td>UNICEF</td>
<td>The United Nations Children's Fund</td>
</tr>
<tr>
<td>USAID</td>
<td>The United States Agency for International Development</td>
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<tr>
<td>WCARO</td>
<td>West and Central Africa Regional Office</td>
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<tr>
<td>ZHDs</td>
<td>Zonal Health Departments</td>
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3 Executive Summary

Introduction

UNICEF’s Diarrhoea and Pneumonia Treatment Initiative in four countries- Kenya, Tanzania, Niger and Ethiopia, was a two-and-a-half-year project supported by DFATD-Canada (now Global Affairs Canada) from April 2013 to December 2015. The overall goal of the project was to contribute to a reduction in child morbidity and mortality through increased coverage of effective treatment for diarrhoea and pneumonia. The ultimate purpose of the project was embedded in the renewed commitment to child survival through A Promise Renewed (APR) - to support scale-up efforts in the countries that accounted for the majority of under-five mortality. UNICEF planned to use this project to accelerate effort to address two of the major child killers – diarrhoea and pneumonia – through building capacity of health systems and reaching out to non-traditional partners. The objectives of this initiative were to: (i) increase public awareness and generate demand for appropriate diarrhoea and pneumonia care-seeking among providers and caregivers, (ii) increase availability of essential medicines used in management of diarrhoea and pneumonia through strengthening procurement and supply chain management, (iii) strengthen public-private partnerships and make better use of private sector channels for appropriate diarrhoea and pneumonia treatment and (iv) expand access to effective integrated treatment services for diarrhoea and pneumonia at community and front-line health facility level.

UNICEF co-chairs the global CCM Task Force and needed to support integrated community case management (iCCM) in an increasing number of countries. Key barriers to scale-up identified through the CI/IHSS program (Catalytic Initiative/ Integrated Health Systems Strengthening) and UNCoLSC (United Nations Commission for Life Saving Commodities for Women and Children) process for diarrhoea and pneumonia included limited access to community level treatment and low utilization of CHW services. Recognizing these bottlenecks, UNICEF expanded its focus to improve demand creation, procurement and supply management of essential, low-cost medicines and overall health system sustainability. This DFATD project tied into several existing global initiatives, which focussed on reducing the under-five mortality due to pneumonia and diarrhoea. UNICEF was identified by the UNCoLSC as the ‘lead convener’ for the ORS, zinc and amoxicillin components of the Commission’s work, thereby leading the implementation of activities focused on these commodities for the Commission. In this way, the project was expected to be fully aligned with the rollout of country activities related to the ORS, zinc and amoxicillin DT components of the UNCoLSC and in coordination with the implementation of the activities related to the broader set of recommendations made by the Commission. The DFATD program was addressed using various approaches within UNICEF. The in-country work was managed by the individual UNICEF Country Offices (Health Section) and comprised of a team of people focusing on each specific project area (Demand Generation, Supply Management, PPP, M&E and Service Delivery). This team managed the on-the-ground implementation, and the direct coordination among affiliated stakeholder partners, local NGOs and government agencies. The regional offices, ESARO (East and South Africa Regional Office) and WCARO (West and Central Africa Regional Office) were expected to coordinate with the various countries within their regions. UNICEF Supply Division (SD) in Copenhagen was
expected to oversee all of the work related to procurement of the commodities and local supply chain management in all of the countries.

At the end of the project, there was need to conduct an external evaluation whose main intention was to evaluate the impact of the UNICEF’s Diarrhoea and Pneumonia Treatment Initiative in four countries- Kenya, Tanzania, Niger and Ethiopia- with an intention of documenting and assessing the development results relating to this initiative.

Study Approach and Target Population

The study employed a mixed method approach, which comprised of both desk research and primary research methods. The desk research phase comprised of review of various project related documents including project baseline report, project monitoring data e.g. training reports, supervision reports, and other related materials such as UNICEF procurement and supply project data, relevant national policies, workshop/meeting minutes as well as administrative reports among other documents. Further, the study collected primary data by carrying out key informant interviews targeting key project stakeholders, relevant national government officials, diarrhoea and pneumonia coordination group leads as well as regional persons in charge of health in the different areas. Additionally, the study made use of face-to-face interviews using a semi-structured instrument with caregivers of children under the age of five years.

Findings from the Evaluation

The findings of the evaluation are presented for each country and responding to the OECD evaluation criteria of relevance, efficiency, effectiveness and sustainability.

a. Focus on Kenya

UNICEF successfully mobilized funds from DFTAD in 2013 to support scale-up implementation of IMCI in primary health facilities and iCCM in underserved areas, as well as to generate local evidence that would inform policy on treatment of childhood pneumonia by Community Health Volunteers (CHVs) in Kenya. The support from DFATD specifically aimed at increasing coverage of pneumonia and diarrhoea treatment in selected counties through implementation of national and county level activities by the end of 2015. The health systems approach to address the unmet need for treatment was intended to contribute towards strengthening the delivery of other child health interventions. The program in Kenya was implemented in three counties/regions; Siaya, Homabay and Turkana. Siaya and Homabay Counties are agrarian zones with high morbidity and mortality rates from diarrhoea and pneumonia and have had disparities in the access to healthcare services, while Turkana represented an ASAL (Arid and semi-arid lands) zone with high morbidity and mortality rates, high poverty rates and has faced many years of underdevelopment and limited access to healthcare services.

The program implementation environment was different from the one anticipated earlier on as health was initially a responsibility of the central government which was then devolved following changes in the constitution to a devolved function that was the responsibility of county governments. In the devolved system, county governments receive funds from national budget based on agreed allocation criteria for use in implementing county development plans and they are tasked with coming up with budgets that are debated by county assemblies before approval.
In this system, it is not guaranteed that funds are used immediately; or that it would be used for similar initiatives across the country. In as much as this form of government has created immense opportunities, it has resulted in challenges that have affected healthcare service delivery in the country due to this.

The program in Kenya focused on demand generation, improving service delivery, supply management and public-private partnerships. Each of these was evaluated and key highlights from the evaluation are summarized below.

**Demand Generation – Communication for Development in Kenya**

For the program in Kenya, demand generation was targeted at the caregivers of children under 5 years as well as their families.

**Introduction and Contextual Information**

Demand generation activities were geared towards increasing public awareness and generating demand for appropriate diarrhoea and pneumonia care-seeking behaviour among providers and caregivers. Among the general public living in these counties, there was a perception that diarrhoea and pneumonia were not major conditions to necessitate medical attention; which affected care-seeking behaviour. The trend among caregivers was to first make use of local and traditional solutions before seeking medical opinion from qualified and trained professionals. Another issue was the traditional subdivision of roles and responsibilities around the homestead that propagated the perception that the role of taking care of children was a female responsibility; where at the first level, it was the responsibility of the mother, and in the absence of the mother, it was the responsibility of the female relatives, and especially the grandmother. This trend was observed in the data collected during the external evaluation, where most caregivers identified by the households were female. While mothers were easier to target and influence through communication, it appeared that there was a challenge doing the same for the other female caregivers, especially grandmothers, as they have a tendency to feel that they were more experienced in childcare making them less receptive to new information.

Further, while the female caregivers were mostly responsible for their children and especially on their health, they were not financially empowered and had to seek support from the male heads of household, who were also the main decision makers in the households. This was observed in both Homabay and Siaya counties with a variance being observed in Turkana where a significant number of caregivers mentioned that they were the main decision makers (53% of the caregivers make the decision themselves, as compared to 21% in Homa Bay and 16% in Siaya). The challenge with decision making being separated from the caregiver was further pronounced by the fact that these male heads of household were reported as being largely being distant from their children’s needs and thus were not keen to follow up on treatment recommendations by health workers - especially where it had a financial implication. Whilst it would be easy to take a joint approach in targeting both the male and the female caregivers in increasing their levels of awareness to create demand for services, communication with the male caregivers needs to be handled with the sensitivity it deserves. This is due to the societal expectations and norms about childcare responsibilities: men feel stigmatised and belittled taking care of children and talking about issues of childcare and therefore the subject of childcare may be difficult to pursue. Worse still, most health facilities are women- centred in their design and in their staffing; especially in
the units dealing with childcare and treatment, making it prejudicial for the male caregivers to seek care there for their children.

These are some of the contextual challenges and situations that the programme was operating under. Activities implemented to generate demand are expounded below.

**Demand Generation Activities Adopted**

Preceding the demand generation activities under this program, a Maternal Neonatal Child Health-Knowledge Attitudes and Practices (MNCH-KAP) study was conducted in 2014 in Homabay and Turkana. The objective was to identify social norms and other individual behavioural and collective practices that negatively affected demand for, and utilization of preventive and treatment measures against common childhood diseases and immunization. The findings from this study were used to develop iCCM CHV job aids and a household booklet that were used for the implementation process. The C4D team at UNICEF led this initiative and brought in input from different partners.

The implementation process of this communication strategy was however different, due to the differences in the existing structures of governance, health provision and community context situations. For instance, in Siaya and Homa Bay Counties, a campaign called “Wadagi,” which means “we refuse” in the local language, was launched. *Wadagi* was a leadership challenge that rallied the communities to refuse preventable deaths in children and mothers. It was a campaign that was highly publicized in local media. In addition to the *Wadagi* initiative, the program also used CHWs to carry out routine social mobilization activities in the different local communities. The *wadagi* initiative was run as part of iCCM. Under iCCM, the frontline health workers were trained to provide information to the caregivers on these health issues, as well as provide the first level of treatment for diarrhoea at community level. For pneumonia, the approach was different due to the challenges posed by the healthcare and treatment guidelines in the country that prevented frontline health workers from prescribing Amoxil DT (prescribed at health facilities by qualified health professionals). In Turkana county, the iCCM approach was adopted as the main initiative to generate demand.

Under the iCCM approach, various activities were done to guide its implementation. First, there was need to identify the frontline health workers, train them, provide them with materials for use and release them to conduct the information sharing with close supervision. In addition to that, it was necessary for the frontline health workers to attend monthly meetings with their supervisors to help them refine their skills and messages (as elaborated further under the Service Delivery component).

**The Effectiveness of the Demand Generation Activities**

A couple of improvements were observed as a result of the demand generation activities implemented. First, there was an improvement observed in the level of awareness on diarrhoea and pneumonia. This awareness was mainly obtained following an interaction with a doctor, nurse or clinical officer in the course of treatment - mentioned by 73% of the caregivers with 87% of these being in Homa Bay county, 51% in Siaya and 83% in Turkana. About 38% of the caregivers mentioned the frontline health workers as a source of this information and it was observed that a similar number (36%) mentioned that a frontline health worker had ever come
to their household to inform them about pneumonia and diarrhoea management in children under 5 years (with 32% of these being in Homa Bay, 35% in Siaya and 43% in Turkana).

Most of the caregivers were able to identify various signs and symptoms of diarrhoea in children under 5 years – with the most commonly mentioned one being how watery the child's stool is (mentioned by 42% of the caregivers). However, the level of awareness of other serious symptoms was low - such as bloody stool (mentioned by 4% of the caregivers), wrinkled or shrivelled skin (mentioned by 1% of the caregivers) and loss of appetite (mentioned by 1% of the caregivers). With regard to the levels of awareness on symptoms for pneumonia for which they would be required to seek immediate medical attention and recommended treatment options, fewer caregivers were able to identify these. Only a third of the caregivers mentioned difficult or fast breathing, further, only 20% of the caregivers were able to mention chest in-drawing. About 20% of the caregivers were not able to mention any sign or symptom, and most especially in Homa Bay and Siaya counties. Turkana county performed better based on the proportion of caregivers that could clearly identify the critical signs and symptoms for pneumonia for which they are required to seek immediate medical attention.

There were reports from the various program implementers that improvements were observed and that the program helped improve care-seeking behaviour among the caregivers. The evaluation team observed that while approximately 56% of the caregivers mentioned that their children had suffered from diarrhoea within the last three months, only about three-fifths of these took their child/ren to a health facility. The rest of the caregivers resorted to using home remedies, buying drugs from a chemist or pharmacy or giving the child left over medicine. A small proportion of caregivers (7%) mentioned that they did not do anything during their child's last episode of diarrhoea, but rather, waited to see how it would progress. This was largely reported in Siaya and Turkana counties. To ensure consistency in the approach by all healthcare professionals including chemists/pharmacies/drug shops it would have been important to ensure that even these were trained and used to scale up the implementation at their outlets. However, it seemed that that the demand generation activities largely focused on the public health facilities and thus monitoring the privately owned outlets became difficult. With regard to care seeking behaviour for pneumonia, it was observed that almost half of the caregivers sought medical attention from a health facility or from medical personnel on the most recent episode of pneumonia that their child had. When one compares care-seeking behaviour for diarrhoea against that for care pneumonia, care seeking is better for pneumonia with 72% mentioning that they sought immediate medical attention. This was consistent across all the program areas. There was a sizeable proportion of caregivers that continued to wait before seeking medical attention depicting the need for continued education and awareness enhancement.

With reference to the levels of awareness on products used to manage these diseases, it was noted that 88% of the caregivers in total were aware of ORS and 53% are aware of zinc. It was observed that the levels of awareness of the ORS/Zinc Co-pack was however low at 15%. The same trend was observed in all of the three program areas. Most of the caregivers across the different counties, and more so in Turkana county got to know about ORS from a doctor, medical officer or a nurse in a public health facility (89%). This is followed at a distance by frontline health workers (15%); with the most mentions of this type of personnel being in Turkana County (21%). A similar trend was observed with zinc where most caregivers got to know about it from a doctor,
medical officer or nurse in a public health facility (84%); with few (13%) mentioning frontline health workers (especially in Turkana county). For the ORS/Zinc co-pack on the other hand, no variation was observed, as the main sources of information were a doctor, medical officer or nurse in a public health facility (86%) and a frontline health worker (14%). Interestingly, no mentions of frontline health workers were made by the caregivers in Siaya county. Additionally, majority of the caregivers got to know about ORS more than 3 years ago, meaning that other prior programs could have resulted in this. However, it appears that the program helped improve the levels of awareness to zinc and the ORS/Zinc co-pack, as the level of awareness for these two products was mostly mentioned to have happened within the last three years.

For Pneumonia, 52% of the caregivers mentioned that they were aware of Amoxicillin for the treatment of pneumonia in children under the age of 5 years. They were referring to the suspensions and capsules as no caregiver mentioned that they were aware of Amoxil DT. These caregivers got to know about Amoxicillin from a doctor, medical officer or a nurse in a public health facility in 90% of the instances; a trend similar to the one observed for ORS and consistent across the program areas. Knowledge about Amoxicillin did not seem to have resulted much from the program as slightly more than half of the caregivers mentioned that they got to know about Amoxicillin for the management of pneumonia in children under the age of five years over 3 years ago.

An improvement in the usage of these products was also explored. The program implementation data showed that usage of these products had improved. We triangulated this data with data from the evaluation and it was found that whilst majority of the caregivers had ever used ORS (89%), less than half of the caregivers reported having used zinc (44%). An even smaller proportion of the caregivers (11%) reported having used the ORS/Zinc co-pack. Apart from the ORS/Zinc co-pack whose use was mentioned as recent, slightly more than a third of the caregivers using the other separated products started using them more than three years ago. Majority of the caregivers (92%) indicated that they liked ORS because their children respond faster to treatment, while on the other hand, 21% of the caregivers did not like it because it had a bad taste (21%) and also because it was not readily available (13%), especially in Siaya. Zinc on the other hand was liked for the fact that children respond faster to treatment (96%) and mainly disliked for its taste (27%) as well as issues around its availability (13%) and pricing (11%). With the co-pack on the other hand, the likes included the fact that children respond faster to treatment (83%) while the main dislike was about its unavailability (23%). For Pneumonia, approximately 58% mentioned that they have ever used Amoxicillin for the treatment of pneumonia. About 46% started using Amoxil over 3 years ago. Amoxil was liked for the treatment of pneumonia for its effectiveness (90%) while 16% of the caregivers reported issues with its availability; especially in Turkana county. As noted previously, Amoxil DT was not readily available in the counties of focus and its use was therefore limited. Caregivers therefore included other forms of Amoxil in their responses.

The evaluation also assessed the level of preparedness for future episodes of diarrhoea and pneumonia, especially noting challenges with availability of these products that had been cited. It was observed that 70% of the caregivers did not have any product that could be used for the management of diarrhoea in their households in the near future. Only 1% had the ORS/Zinc co-pack in their household, an indication that there was a need to scale up its availability. For
pneumonia on the other hand, while the re-use of Amoxil or the use of antibiotics purchased over the counter is discouraged, but it was interesting to note that a proportion of the caregivers still keep left over antibiotics for future use. About 17% of caregivers reported that they had Amoxil while 18% had paracetamol to manage fever for a future episode of pneumonia.

Efficiencies with the Implementation of the Demand Generation Activities in Kenya

The demand generation activities were carried out in close collaboration with the county governments, the national governments, as well as other non-governmental partners. The clear subdivision of roles and responsibilities between all the partners was observed. From the evaluation work, it was clear that the UNICEF C4D team was tasked with the creation of communication material for both the caregivers as well as the frontline health workers. To encourage ownership at county level, the C4D team at UNICEF ensured that materials were tailored to the local county governments, including even the county logos to encourage ownership. It was also noted that to implement iCCM, close collaboration was necessary between the national governments and the county governments. The national government had been driving iCCM before the restructuring of government to a devolved system and thus, had the experience and information on how to make an impact with that model. At county level, there was an attempt to engage the county governments to use iCCM to generate demand and this was evident from the wadagi initiative.

A few elements however affected the efficiency of the demand generation activities. Hospitals and health facilities are few in the different villages making the need for frontline health workers high. However, only 36% of the caregivers mentioned that they had ever been visited by a frontline health worker meaning that the reach would need to be scaled up. Further, it was observed that there was little or no follow-up on the treatment regimen provided by the frontline health workers, a factor that was limiting the effectiveness of the healthcare services provided. Additionally, though the frontline health workers were useful in meeting the demand for services, there is a need for county governments to prioritize the construction of additional health centres that are closer to the caregivers to make the referral process easier.

Sustainability of the Demand Generation Activities in Kenya

As noted earlier, the demand generation activities were implemented in close collaboration with the national and county governments. The partners and especially government partners clearly understood that sustainability of such a program could only happen through local support. Thus, the training, monitoring and supervision of the frontline health workers were driven by the county governments in an attempt to improve ownership and sustainability. A good example is the Wadagi initiative that was led by the county government and which became a critical focus area during community meetings. However, a few elements were observed that could affect sustainability of these demand generation activities in the three counties. These included: (i) the need for demand generation activities targeting all household members, including the males in the households, (ii) the challenge of monitoring private health providers to ensure consistency, (iii) low awareness and availability of Amoxil DT and (iv) weak link systems with other health providers.
Improving Service Delivery in Kenya

The service delivery activities were aimed at supporting scale up of the implementation of IMCI in primary health facilities and iCCM in underserved areas. The restructuring of government following the Kenya Constitutional promulgation of 2010 from a centralised system of government to a devolved system of government however affected and slowed down the establishment of similar structures at the county level, to coordinate with the programs at national level. Thus, a different approach was adopted for the different counties during the implementation. In Homabay county, KEMRI had on-going programs and UNICEF collaborated with this organisation to implement this component. In Siaya and Turkana counties, it appeared that the service delivery component was implemented through the health facilities and through iCCM. Through the iCCM model in the three counties, CHVs were providing treatment for diarrhoea with ORS and Zinc, testing children with fever using RDTs and treating those testing positive for malaria, identifying and referring children with acute malnutrition and new-borns and children due for immunization. Activities carried out are expounded below.

Activities Conducted Under the Program to Improve Service Delivery

There was need to create an enabling environment for improving the service delivery component, whereby various partners adopted new WHO guidelines on classification and treatment of childhood pneumonia. First, an iCCM taskforce was created at both the national level and at county level to increase partnership for iCCM to champion a national framework and M&E plan for iCCM as well as training manuals to be used. It was done in collaboration with a variety of partners. Further, CHV job aids and iCCM household booklets were prepared. It is under this that the leadership challenge called the Wadagi initiative was launched in 2014 in Homa Bay and Siaya counties to increase support to CHVs. A similar approach was attempted in Turkana later in the project. It was reported by UNICEF in its DFATD program’s final summary presentation that 5,271 iCCM were trained and these included CHVs, CHEWs and frontline health workers in the three counties. Specifically, in Turkana County, it was reported that UNICEF supported the reorganisation of CHS and further, the employment of 130 CHEWs. At the time of the evaluation, there was ongoing support to model iCCM to the nomadic population.

As the ICCM model was mainly supported by frontline health workers, it was essential to understand their background, training, supervision and responsibilities. In terms of their selection, these were drawn from local communities and their qualifications varied because their selection was predominantly based on factors such as respect, their interest in the subject and in learning, as what was key was their ability to support the communities. In terms of gender, most of the frontline health workers were female. The issue of childcare is still largely regarded as a female affair, and thus, female caregivers are thought of as most appropriate in e with female health workers. From the quantitative data collected from the caregivers, it was observed by 76% of the caregivers that frontline health workers are mostly female. The highest proportion of male health workers was found in Turkana where 53% of the caregivers reported this. There was a higher preference for female frontline health workers (73%) as compared to male ones. This was with the exception of Turkana county, where a 50:50 split in the preference for male and female frontline health workers was observed. All in all, female frontline health workers were generally accepted by communities and caregivers reported relating with them well.
Once the frontline health workers were identified, they were taken through a training program, which covered both basic training and orientation as well as iCCM specific training. It appears that the trainings were conducted using a mixed model approach where the first days were residential using a classroom approach, followed by practical training at their link facilities. After training, the community health workers were taken to link facilities where they were monitored to check their competencies and eventually, those that got certified were released and facilitated to begin work in their communities. They were equipped with essential commodities (ORS and Zinc in the 3 counties and Amox DT in Homabay county) to carry out their work. The responsibilities of the front line health workers were first to enlighten the communities on the various issues touching on child health as well as to provide first level of care and treatment to the children in their communities. These workers received support when carrying out their duties, which included monthly stipends. In addition, they received on the ground support as they carried out their duties. Some variances were however seen in the frequency of the supervision visits across the 3 counties of focus. It was noted that there were national guidelines that guided the frequency of supervisions (quarterly, with more visits being allocated on a need basis). However, despite these guidelines being in existence, inconsistencies in supervision were still reported, even within the same county. It was observed that human resources appeared to be one of the challenges hindering frequent supervision visits.

**Effectiveness of the Improving Service Delivery Component in Kenya**

The efficiency that was achieved by improving service delivery can be seen in a number of factors: (i) information to caregivers was made available at community level and in a language caregivers understand; (ii) it was possible to meet the demand for services generated at a local level, and (iii) the service delivery component has been able to build local capacity in general.

**Efficiencies within the Implementation of the Service Delivery Component**

The program with regard to improving service delivery operated efficiently because it made use of existing structures within the community and worked with other partners that had similar programs in these areas such as KEMRI, Save the Children, PATH and CHAI. Further, the service delivery component could not have been successful if it did not involve both the national and county governments. The national government had been championing the iCCM program before the program came into existence and thus it was necessary to have their input. Further, as the health component was devolved to the county level at the time of the project’s implementation, there was need to work with the county governments. This worked well for the different counties because the county governments were able to provide training and support to the frontline health workers. The county governments were able to replenish some of the essential medicines and provided a structure for supervision of the frontline health workers. The messaging was also consistently created and applied across the three counties, with slight modifications to cater for contextual issues such as literacy levels of the caregivers.

**Sustainability of the Service Delivery Component Established by the Program**

While the program was implemented efficiently, there are issues that needed to be checked for to encourage sustainability of this model. First, is the fear that attention to certain messages or interventions were not given proper attention due to the message load that frontline health
workers have to cover. Secondly, there was poor information transfer and sharing between the national governments and the county governments. Thirdly, policy limitations on the ability of frontline health workers to administer Amoxil DT could affect scale up. Lastly, is the expectation by the households that adults will get access to treatment under iCCM and thus, additional education may be required to sensitize community members.

**The Supplies Management Component**

The task under the Supplies Management component was to increase availability of essential medicines used in management of diarrhoea and pneumonia through strengthening procurement and supply chain management.

**The Need for the Implementation of the Supplies Management Component**

The transition to a devolved system of government caused disruptions in the supply chain. Initially, KEMSA was responsible for procuring, warehousing and distributing drugs and medical supplies. It had been for long time been the national strategic stock reserve for prescribed essential health packages and for national referral hospitals. Thus, under such a structure, it was easier to procure a product as long as the product had the support of the Ministry of Health and was contained in the essential medicines list. However, with devolution, the role of the central medical stores (KEMSA and MEDS) became unclear and county governments were not mandated to procure from KEMSA. Thus, KEMSA needed to re-invent itself to enter into partnership with local governments with the purpose of providing the services of procurement, warehousing and distribution of drugs and medical supplies. Thus, a lot of advocacy work was required with the various county governments to harmonise procurement and the advocacy efforts resulted in a general agreement that KEMSA and MEDS will remain the primary sources of medical supplies.

**Supplies Management Activities Implemented Under the Program**

Various activities were implemented under the supplies management component. First was the drive towards the deregulation of ORS and Zinc that was pushed by various partners including CHAI, PATH, and USAID/MCHIP. Further, was the drive towards introducing an ORS/Zinc co-pack and making it locally available at the community level; and this was done in close partnership with CHAI for which, a long-term agreement exists. Further, and with regard to pneumonia disease control, UNICEF was involved in the procurement of Amoxil DT in Homa Bay to minimise stock-outs that were being experienced. It was also necessary to review the essential medicines list to reflect Amoxil DT and activities toward this were led together with PATH and KPA. Finally, it was necessary to provide an environment where the co-packed ORS and Zinc was made available.

Kenya has a solid local manufacturer base and UNICEF needed to provide technical assistance to two ORS/Zinc Co-pack suppliers (Universal and Cosmos) to enable them achieve global manufacturing standards. It emerged from various reports that Universal Manufacturers has already been approved and Cosmos was expected to follow in the same path. Their approval is now expected to increase the availability of the product in the entire East Africa region.
Effectiveness of the Supplies Management Activities

There were instances when supplies were available in the health facilities and with the frontline health workers, but there were also other instances where stock outs were experienced. From the caregivers’ perspective, it emerged that about a third had experienced drug stock outs for both ORS and Zinc. This was especially pronounced in Turkana County for both ORS (34%) and Zinc (40%). Thus, most of the people had to travel for long distances to acquire the products, including the ORS/Zinc co-pack. About 15% of the caregivers had tried purchasing or acquiring ORS and it was not available (within the last three years). The stock out was most felt in public health facilities and especially in Turkana and Homa Bay counties. The caregivers experienced the ORS stock-outs about once in the last one year and around 51% of these noted that the situation had improved from what it was in the previous year. With Zinc on the other hand, a similar trend was observed where 12% of the caregivers mentioned that they tried purchasing it and it was not available. This happened for more than half of the caregivers within the last six months. This stock-out for zinc was experienced by 67% of the caregivers in public health facilities and more so in Turkana county. All the same, the situation on the availability of zinc improved in the last one year. With regard to the ORS/Zinc co-pack, while 8% of the caregivers had tried purchasing the product, 4% indicated that the product was not available. This was reported to have been within the last three months, and more so, in public health facilities. There was consensus that there had been improvements in the availability of the ORS/Zinc co-pack in the last one year. With regard to pneumonia, 25% of the caregivers that had faced challenges acquiring Amoxicillin noted that the drugs were not readily available. As mentioned earlier, knowledge about Amoxil DT was quite low and thus the reference given was for Amoxil suspensions. A similar proportion of caregivers (21%) mentioned that they had tried purchasing or acquiring Amoxil and it was not available. Attempts were made to acquire or purchase Amoxil at a public health facility and it was not available (mentioned by 48% of the caregivers). It is worth noting that scarcity of Amoxil was equally experienced in local pharmacies and drug stores as mentioned by 42% of the caregivers. Most of these instances happened in the last two years, though, there were arguments that the situation had improved in some areas and stayed the same in others. There is a lot of work that remains to ensure that these essential medicines are available at the local level – closer to the caregivers.

Efficiencies Observed with the Supplies Management Activities

A couple of efficiencies were observed in the supplies management activities. First, was the attempt to streamline supplies management through KEMSA even with its threatened position following devolution in Kenya where county governments were in charge of their own procurement and were not mandated to procure through KEMSA. It was commendable to observe that KEMSA was able to find its relevance by shifting its focus from providing support to the national governments to providing support to the county governments. Using such existing structures, the program was able to focus on other supplies management activities that were required, such as the procurement of Amoxil DT in Homa Bay to minimise stock outs in addition to pushing for the review of the essential medicines list to include Amoxil DT. In addition to that, the program was able to participate in the deregulation of ORS and Zinc in close collaboration with CHAI, PATH, and USAID/MCHIP to allow for frontline health workers to administer. As noted earlier, the program was able to push towards introducing an ORS/Zinc co-pack and making it
locally available at the community level; and this was done in close partnership with CHAI for which, a long-term agreement exists. Further, it was necessary to provide an environment where the co-packed ORS and Zinc was available. UNICEF also provided technical assistance to two ORS/Zinc Co-pack suppliers (Universal and Cosmos) to enable them achieve global manufacturing standards. This been achieved for Universal Manufacturers while that for Cosmos was expected to follow. Their approval was expected to increase the availability of the product in the entire East African region. All these point to a high level of efficiency and collaboration in the way the supplies management component was implemented.

However, the program seemed to suffer from issues of supplies management, as well as the issue with commodity tracking and monitoring. As observed earlier, caregivers were noted as having experienced stock-outs of either ORS, Zinc or the ORS/Zinc co-pack. The same was mentioned by the frontline health workers that they were not stocked with adequate supplies. It was observed that weak ledger management systems exist at all levels of service provision which affect the level of forecasting. Thus, responses to supply issues were delayed and further plagued by inadequate financing by the counties. The program tried to develop a web based commodity monitoring platform accessible through a mobile phone and this was implemented in Homa Bay, and commodities tracked in during the commodity management meetings at sub-county level. In Siaya county, social media platforms were used to manage redistribution of products within the county; where excesses existed and the platform enabled the redistribution of these products to areas where stock outs had been experienced. All in all additional work may be required to strengthen this ledger management system but for that to happen, there needs to be some coordinated effort and sharing of information between the national government and the county governments. A joint national and county working group was proposed to facilitate better record keeping, multi-year forecasting as well support towards the standardisation of tools used for managing these records. Another area where the program may not have worked efficiently was that it was not able to anticipate how much loose ORS and Zinc was available in the counties from other previous programs and initiatives while pushing for new products. It appears that there were loose ORS and Zinc that were in existence in the counties and which were at risk of wastage if the co-packed one had been procured immediately. It thus might have been better to choose a system that fit into existing solutions while trying to drive change.

**Sustainability of the Supplies Management Activities**

This was one of the components in which a greater degree of collaboration was observed between various state agencies, local government agencies as well as other development partners. This component also involved the participation of private drug manufacturers who were required to fill in the demand that had been created at community level. However, for this to work and remain sustainable, a number of things would be required: (i) standardization on the Presentation of ORS and Zinc among all implementing partners, (ii) Improved Ledger Management Systems to support forecasting and to enable distribution of products from central stores to the different regions and (iii) policy standardization need for the prescription of Amoxil DT by the frontline health workers.
Public-Private Partnership Activities in Kenya

The intention of the activities under the Public-Private Partnership Activities was to strengthen public-private partnerships and make better use of private sector channels for diarrhoea and pneumonia treatment.

The Need for Public-Private Partnership Activities in Kenya

During the first year of the project, Kenya’s principal PPP goal was to increase the availability of, and demand for, a co-packaged ORS-zinc product.

Public-Private Partnership Initiatives Implemented in Kenya

Partnerships were formed with various players and tasks were assigned. There were partners that were tasked with running a communication campaign in various target regions. It appears that there was a technical working group at national level for the program, while others were tasked with running a media campaign. Others were tasked with preparing health tool kits for maternal and child health, while others looked at ensuring product availability, co-packaging and distribution. As mentioned previously, two local companies, Universal and Cosmos, had been producing small quantities of the product, and UNICEF provided technical support to both companies to make adjustments to their facilities to meet global standards. Having two private drug manufacturers producing the co-pack was expected to increase the availability of the product in the entire East Africa region, and the competition between the two companies was expected to keep the prices at a reasonable level. Further, UNICEF worked with the County Health Teams and CHAI to manually bundle existing ORS and Zinc for distribution at all health facilities in the target counties. It does appear however that this manual bundling took place at national level and not county level to address existing products at this level. This means that a significant proportion of loose packs were still in circulation even in the link facilities that frontline health workers were expected to draw their support from. It was reported that UNICEF was working with the three County Health Management Teams CHMTs, Save the Children, KEMRI and other partners to map private facilities and distribution points. There were efforts first to engage the ministry of health and KEMSA to stock the ORS/Zinc Co-pack. Then there were partnerships with private chemists and drug shops in the three counties to sensitize private sector providers about the essential medicines and with focus on ORS/Zinc bundling. This effort to scale this up needs to continuously reviewed because it appears that there were challenges monitoring compliance by private health facilities. This problem can to an extent be solved in the future by having programs that ensure complete bundling of ORS and Zinc so that no loose product exist in the market. With regards to Pneumonia, it appears that the program did not have many partnerships to increase their availability as it was mentioned that UNICEF continued to procure these to minimize stock-outs that were being experienced in Homa Bay where a pilot program was being implemented. The only partnership mentioned with regard to Amoxil DT was the collaboration with PATH and KPA to review the essential medicines list to contain this product. Further, there were partnerships to support iCCM in some counties such as Turkana, which worked together with the county governments to generate demand and to improve service delivery.
Effectiveness of the Public-Private Partnerships Implemented

The public private partnerships helped achieve a number of things. First, an ORS/Zinc co-pack became available due to the collaboration efforts with CHAI and this became available in the local areas. However, there is need to scale up these efforts because it was observed that only 4% of the caregivers have ever tried purchasing or acquiring the ORS/Zinc co-pack and it was not available; yet this happened when the program was being implemented. While this figure (4%) looks minimal, it is worth noting that approximately 92% have never tried purchasing or acquiring the co-pack, which goes to show that additional demand generation activities may be required to go hand in hand with improving supplies. The few caregivers that were aware of it reported experiencing issues with availability (24%). Another achievement realised in the public private partnership activities was the training of 82 private chemists and local shops to deliver iCCM in Siaya. However as mentioned earlier, it was difficult to monitor whether private chemists and local shops were selling ORS and Zinc together because it was reported that these were being sold separately due to consumer demand issues (customers ordering one product only due to issues with pricing/ finances). That however was not a problem that affected private facilities only but also affected public health facilities in the initial stages.

Efficiency of the Public Private Partnership Initiatives

As noted earlier, the public private partnership initiatives were well structured and helped to achieve certain results. One challenge though, was that it was felt that coordination of these initiatives could have been done more frequently and in a more structured manner.

Sustainability of the Public Private Partnership Initiatives Implemented

Various partners were involved; each that funded a portion of their component. This means that some of the activities would be able to continue and are continuing in the future through these partners. A few challenges were observed however that are likely to affect the program’s sustainability: (i) high attrition of providers in the private sector, especially in the rural areas, that makes it difficult to maintain the results from the training they had and (ii) the need to mop out loose products and encourage bundling at local level to improve compliance.

b. Focus on Tanzania

The Diarrhoea and Pneumonia Treatment Initiative Program in Tanzania was implemented in 2013 with the overall objective of contributing towards the reduction of child morbidity and mortality through increased demand for and reliable supply of effective treatment for diarrhoea and pneumonia in Tanzania. The program was implemented in selected areas of Tanzania; in Mbeya, Iringa and Njombe regions (Mbeya Municipality, Mbeya District Council, Makete District Council, Njombe District Council, Iringa District Council and Mufindi District Council), which were considered to be some of the regions with a high burden of diarrhoea and pneumonia and therefore viable for intervention. It was noted that the programming in Tanzania was done as part of wider multi-sectored interventions planned by UNICEF. It therefore addressed other health sector interventions - such as water and sanitation, education and other social support provision in addition to diarrhoea and pneumonia for a more integrated and comprehensive outcome. Below is an overview of the evaluation results for Tanzania.
Demand Generation – Communication for Development in Tanzania

Demand generation was targeted at various stakeholders in the health sector as well as to the caregivers of children under 5 years and their families.

The Need for the Demand Generation Activities

Care seeking behaviour was identified as one of the leading barriers in the reduction of child morbidity and mortality in Tanzania with studies continuing to show that care seeking for sick children needed to be improved. Findings from a previous formative research that informed this implementation showed that the issues that affected care seeking behaviour were found to be economic affordability, breath/ range of services, competence/ expertise of staff, accessibility, affinity and longer service hours. The demand generation aspects of the program expected to achieve results which included (i) To make certain that professional associations and community leaders advocate for pneumonia and diarrhea, (ii) To have caregivers exposed to national awareness campaigns on pneumonia and diarrhea, (iii) To ensure that caregivers are exposed to behaviour change communication by frontline providers and local partners about the dangers and signs of and appropriate treatment for diarrhoea and pneumonia, and (iv) To have strategies prioritized to reduce non-financial and financial barriers to treatment identified by caregivers.

Demand Generation Activities Implemented Under the Program

A number of activities were developed and implemented in order to achieve the planned results. These began with the development of a communication plan using a multi-sectored approach (with representation from key sectors including the Ministry of Health, intervention district councils, professional associations, faith based organizations, as well as representation from other key stakeholders and development partners). Activities carried out included launching a national event aimed at securing a conducive policy for strengthening services for prevention and treatment services for diarrhoea and pneumonia for children under the age of five (targeting policy makers and the general public), advocacy sessions with members of parliament’s social service committee, advocacy sessions with local government authorities in the three focus regions (targeting key decision makers), as well as advocacy sessions with professional associations (Paediatric Association and Association of Private Health Facilities). In addition to that, a communication plan was also developed for social mobilization and behaviour change that was aimed at raising community awareness, encouraging dialogue and participation as well as creating demand for preventive and treatment services provided for pneumonia and diarrhoea. Key activities carried out under this communication plan included the production of multi-media materials for mass media communication for (TV and radio programming, “push sms” activities where members of the public received short messages on diarrhoea and pneumonia prevention and treatment and distribution of posters and fliers with messaging on diarrhoea and pneumonia management) as well as door to door educative visits by community health workers targeting pregnant mothers and mothers with children under the age of five years). Sensitization meetings- targeting ward and village executives, village persons, community health workers (CHWs), community influencers, religious leaders, traditional birth attendants/healers and caregivers were also carried out in addition to orientation and training sessions targeting CHWs and frontline health workers (Integrated Management of Childhood Illnesses- IMCI- course targeting frontline health workers) at the district/ward levels.
The Effectiveness of the Demand Generation Activities

From the data generated by both the program as well as the external evaluation, there are a couple of improvements observed. First, there were improvements in the levels of awareness about diarrhoea and pneumonia. Key sources of information on these diseases were indicted as frontline health workers (mentioned by 56% of the caregivers) and doctors/nurses/clinical officers (mentioned by 56%). A sizeable number of caregivers (20%) mentioned that they had been visited by a frontline health worker at the households and informed about appropriate management of diarrhoea and pneumonia, and more so, in Mbeya region (26%).

There were also improvements seen in care seeking behaviour. From statistics availed by health facilities in the targeted regions, there seemed to have been a gradual increase in the number of diarrhoea and pneumonia treatments at the health facilities since 2014. It was also observed that there were increased levels of awareness on the importance of adhering to preventive measures and timely care seeking in the event of illness. A sizeable number of caregivers (49%) reported that they decided to seek immediate care from a health facility on realizing that their child/ren had an episode of diarrhoea. Concerning pneumonia, a significant number of caregivers (74%) reported that they did not seek medical attention from a health facility or medical personnel on the most recent episode of pneumonia. Upon further investigation of why this was the case, it was noted that parents tended to use leftover medicines from previous episodes, and also that there were fewer episodes experienced as compared to the past (the study investigated episodes that could have been experienced more than a year ago).

Thirdly, there were improvements in the awareness of products used in the management of pneumonia and diarrhoea. It was noted that a significantly high number of caregivers were aware of ORS in the management of diarrhoea. A significantly lower number were however aware about zinc (28%) and the ORS/Zinc co-pack (16%). Additionally, a sizeable number of caregivers (9%, across the 3 intervention regions), reported that they were not aware of any product, depicting knowledge gaps. When asked about their sources of information, about 79% of the caregivers reported having learnt about ORS from a doctor/medical officer/nurse with a sizeable number also indicating frontline health workers (22%), a more so in Mbeya region (reported by 83% of caregivers). The same trend was observed about zinc where majority of the caregivers (73%) reported having learnt about the product from a doctor/medical officer/nurse with 28% also indicating frontline health workers. Similarly, a significant number of caregivers (68%) also reported having learnt about the ORS/Zinc co-pack from a doctor/medical officer/nurse. In contrast to the trend observed in the sources of information about the ORS and zinc however, a sizeable number of caregivers (29%) reported that they had also learnt about this product from a pharmacy/chemist. Likewise, there was a high level of awareness of amoxicillin suspension as the product used to treat pneumonia in children under 5 years (reported by 61% of the caregivers). With regards to the time period when caregivers got to know about these products, it was observed that over half of the caregivers interviewed got to know about the products within the timing the program was being implemented; an indication that the activities implemented under the program may have contributed to the increase in awareness levels.

Fourthly, it was observed that there were improvements in the level of usage of the recommended products for managing diarrhoea and pneumonia in children under 5 years. About
88% of the caregivers reported that they had ever used ORS in the management of diarrhoea in children under 5 years. In contrast, however, fewer caregivers indicated that they had ever used zinc (24% usage) and the ORS/zinc co-pack (13% usage) depicting knowledge gaps that would need to be addressed. Over half of caregivers who had ever used these products however reported that they had done so within the program implementation period; an indication that the program activities may have contributed in generating awareness and subsequent usage. Additionally, when asked about the top likes and dislikes of these products, caregivers indicated that they mainly liked ORS because children responded faster to treatment (95%), because it was readily available (30%, and more so in Mbeya region) and because it was affordable (27%, also mainly in Mbeya region). The main dislikes reported by the caregivers about this product included its bad taste (39%), its side effects (20%) and its unavailability (43%, more so, in Njombe region). Similarly, caregivers reported that they mainly liked zinc because children responded faster to treatment (96%), its availability (31%, more so in Mbeya and Iringa regions) and its affordability (25%, more so in Mbeya region). Caregivers mainly disliked this product because of its side effects (27%), had bad taste (22%) and because of its unavailability (22%, mainly in Njombe region). With the ORS/zinc co-pack, caregivers mainly liked it because children responded faster to treatment (89%), tasted good (20%) and because it caused no side effects (13%). Caregivers mainly disliked it because it was not readily available (26%, more so in Njombe), it’s bad taste (20%) and because it was not affordable (17%, especially in Mbeya region). For pneumonia, majority of the caregivers (39%) reported that they started using the product over 3 years ago, an indication that they were referring to other forms of the product (and not Amox DT). Caregivers reported that they mainly liked the product because their children responded faster to treatment (96%), it was readily available (25%, and more so in Mbeya), and because it tasted good (13%). Caregivers mainly disliked the product because of its bad taste (26%), it was not affordable (23%, more so in Mbeya region) and because it was not readily available (22%, more so in Njombe). For both diarrhoea and pneumonia products, there seems to have been an issue with availability in the Njombe region.

Lastly, the evaluation also investigated the level of preparedness of the caregivers in managing future episodes of diarrhoea and pneumonia in their children under 5 years. It was observed that 57% of the caregivers did not have any product in their households that they could use in the management of diarrhoea. Additionally, only 3% reported having the ORS/Zinc co-pack, the product meant to encourage the simultaneous usage of both products for more effective treatment of diarrhoea in children under 5 years. For pneumonia on the other hand, while the re-use of Amoxil or other antibiotics purchased over the counter is discouraged, interestingly, some caregivers reported that they had paracetamol (39%), Amoxil (29%) and cough syrups (21%) for managing future cases of pneumonia.

**Efficiency of the Demand Generation Activities in Tanzania**

It was noted that the demand generation activities were carried out through a multi-sectored approach with representation from key sectors of the MoHSW, intervention districts councils, professional associations, faith-based organizations as well as representation from other key stakeholders and development partners. This alluded to clear roles and responsibilities were assigned at the onset for the activities that were planned to be more effective. To encourage participation and ownership, activities were driven through MoHSW, first through the
development of materials that encouraged a conducive and supportive policy environment for strengthening healthcare services for the prevention and treatment of diarrhoea and pneumonia, and secondly through the development of tailored communication materials for social mobilization and behaviour change at the local level of the targeted regions. A few elements were noted that affected the efficiency of the demand generation activities. First, the involvement of the private sector appeared to have been limited. As reported by one of the private partners interviewed, some of the participants targeted during the demand generation activities were more business oriented (such as wholesalers) and not in primary contact with the caregivers. Further, noting that the targeted regions were largely rural, and therefore had few or no public health facilities close by, frontline health workers were the next link for caregivers seeking care. Yet, only 20% of the caregivers reported having ever been visited by a frontline health worker at the household. This meant that interaction with caregivers was only limited to occasions when they sought medical attention at a facility, depicting a need to increase the number of frontline health workers and/or improve efficiencies to ensure larger coverage during household visits.

**Sustainability of the Demand Generation Activities in Tanzania**

As observed earlier, it was clear that the demand generation activities were carried out through a multi-sectored approach with representation from key sectors of the MoHSW, intervention districts councils, professional associations, faith based organizations as well as representation from other key stakeholders and development partners. This involvement of multiple players ensured that multiple interests were addressed and multiple organisations were able to make contributions to the implementation activities. Further, engaging these multiple sector players meant that there was more ownership in the program activities. However, there were few things that could have been done to enhance the sustainability of the demand generation activities in Tanzania. First, there was a need for demand generation activities to be tailored such that they targeted all household members—especially male members of the household. Secondly, challenges of long distances, the lack of drugs and high costs of treatment as perceived by caregivers needed to have been given more attention for more sustainable outcomes.

**Improving Service Delivery in Tanzania**

The MoHSW with the support of WHO started a distant learning Integrated Management for Childhood Illnesses (dIMCI) pilot in September 2012, which was aimed at scaling up the IMCI program adopted in 1996 in Tanzania. The dIMCI training materials incorporated recent policy changes in the management of diarrhoea and pneumonia using combined Zinc/ORs and Amoxicillin DT as outlined in the UNCoLSC. The service delivery activities implemented under this program intended to support Tanzania scale up the implementation of the dIMCI in primary health facilities in underserved areas.

**The Need for the Service Delivery Component**

Following the adoption of IMCI in 1996, there was extensive roll out to train health workers on the same. However, studies have shown that only less than half of health facilities had IMCI trained staff (from the SARA study carried out in 2013). Moreover, it was observed that there had been no re-training after the revision of the IMCI guidelines in 2009, where Amoxil DT was included as the first line treatment for pneumonia treatment and Zinc added for diarrhoea treatment. Thus, knowledge gaps were bound to exist among the health providers.
Consequently, the IMCI training was challenging because the training took a lot of time, and meant that clinical staff would be away from their duty stations and would not able to provide treatment service. The dIMCI option was therefore perceived to be more viable. UNICEF supported the process of scaling it up, where findings from the formative research (carried out at the onset to inform the implementation processes of the Diarrhoea and Pneumonia Treatment Initiative) were also incorporated. Factors deemed to affect service delivery from the formative research included breath/range of services at the health facilities, competence/expertise of staff, affinity and longer service hours. The service delivery aspects of the implemented program expected results among them including: (i) Having providers trained on appropriate management of diarrhoea and pneumonia, (ii) Having providers equipped with appropriate equipment, materials and supplies, (iii) Having frontline health workers appropriately monitored on a regular basis, (iv) Having supervisors motivated to conduct regular, ongoing supportive supervision for frontline providers and (v) Having standardized operating procedures for supervision of integrated case management.

Activities Conducted Under the Program to Improve Service Delivery

The service delivery component of the program was mainly implemented through the implementation of the dIMCI. This was a 10-week training program which incorporated 3 days of face-to-face classroom learning sessions and 2 follow-up visits by facilitators/supervisors at their duty stations. It was targeted at up-skilling the frontline health workers but it is important to understand the process of selection, training and supervision of these workers to improve service delivery. In partnership with MoHSW, over a 1,000 first line-health workers were selected for training in the six intervention areas. About 70% of these were female frontline health workers while 30% were male health workers. These districts were reported to have a total of 330 health facilities. Following this training, 315 health facilities were reported to have at least one service provider trained. This translated to about 95% coverage, which, when put in context (the 330 health facilities were reported to have about 1,414 providers), meant that about 72% of providers had received training. This presented a gap in training needs. To address it, 18 dIMCI trainers were trained on how to conduct training sessions and a pool of trainers at regional and district levels created. It was found that reference and job aids had been provided to assist the health workers with the training and in their work after the training. About 600 sets of training materials were printed. All trainees and trainers were provided with a set of these materials as well as an IMCI chart booklet to use during training and to refer to at the duty stations. Moreover, post-training follow-ups carried out were reported to have greatly improved the performance of the health providers in case management.

Majority of the frontline health workers trained were female since traditionally, the issue of childcare is still regarded as a female affair and therefore attracting more females in the provision of healthcare for children. Majority of the caregivers interviewed (82%) confirmed that indeed, most of the workers at the health facilities in their areas were female. Interestingly, a significant number of caregivers (63%) indicated that they would prefer being attended to by more male health workers, as compared to female health workers. Additionally, 76% of the caregivers perceived male health workers to be more understanding and sympathetic. The need to look into gender aspects in service delivery may therefore be worth looking into in the future. This
notwithstanding, communities seem to be largely relating well with the frontline health workers - 71% of caregivers mentioned that the community mostly accepts and relates well with them.

Periodic supervision visits by teams trained on dIMCI case management were reported to have been carried out (every six weeks) to help in the transfer of knowledge and skills learnt through the course to day to day activities at the health providers’ places of work. Findings from the evaluation also affirmed that provisions had been put in place to ensure regular supervisory visits at the health centres to addressing existing knowledge gaps and provide on-the-job support on a continuous basis. Standardized guidelines to guide the supervision visits had also been developed. Though supervision was the case in most of the project implementation areas, some project areas, such as Njombe, were found to be lagging behind in terms of regular supervisory visits. As reported by one of the interviewed frontline health worker, no supervision visits had been carried out at the centres in the area after the formal training session ended. In addition to that, and as reported by some of the private partners interviewed, the trainings (and therefore supervision) targeting frontline workers seemed to have been more concentrated in the public sector. Few (or none) of the frontline health workers were drawn from the private sector, except for the other categories such as pharmacists, and wholesalers. This therefore created gaps in service delivery in the private sector.

Effectiveness of the Improving Service Delivery Component in Tanzania

The activities carried out under the service delivery component of this program were found to be effective. First, from the evaluation, it was found that health providers have been instrumental in cascading information on best practices for managing childhood diseases (including diarrhoea and pneumonia) amongst the caregivers. Doctors/nurses/ clinical officers (mentioned by 53% of the caregivers) and frontline health workers (mentioned by 45% of the caregivers) were found to be the most effective in providing this information to caregivers. In addition to that, the caregivers also reported that they trusted them the most as compared to other sources of information. That notwithstanding, while frontline health workers are the first point of contact with the caregivers, it was noted that there is a need to invest more in developing these workers’ skills in personal conduct and interpersonal relationships to scale up the level of trust that caregivers have in them. In Mbeya and Njombe for instance, the level of trust in these workers by caregivers was found to be particularly low. Secondly, findings from data collected from caregivers, it was evident that health providers, and more so, frontline health workers, were perceived to have alleviated or lessened the challenges faced by caregivers in communities during care seeking. About 64% of the caregivers indicated that frontline health workers have been able to assist in the lessening of challenges faced by caregivers during the management of child illnesses. This notwithstanding, there is a need to scale up the level of contact with the caregivers for more effectiveness. Only a small proportion of caregivers (20%) have for instance been visited at the household by frontline health workers to be educated about diarrhoea and pneumonia case management.

Efficiencies within the Implementation of the Service Delivery Component

Various efficiencies were observed in the implementation of the service delivery component. First, the distance learning option (dIMCI) that worked towards bridging the training gap by fitting
into the busy schedules of health workers. Secondly, there were efficiencies seem in the supervision plans as they were integrated with other programs. However, there is a need to ensure that continuous supervision takes place for more sustainable results.

**Sustainability of the Service Delivery Component**

While the program was implemented efficiently, there were issues that need to be checked for sustainability. First, and there is a need to ensure that continuous supervision of the health workers takes place. In Njombe for instance, it was reported that no supervision had taken place since the formal training had taken place. Secondly, there is a need to address policy challenges that limit the lowest level of care to health centres as compared to the household level, an approach which would be more effective.

**The Supplies Management Component**

The supply management component of the program needed to First ensure that the recommended essential medicines for the treatment of diarrhoea and pneumonia were formerly registered in the country and subsequently to ensure their availability through strengthening procurement and supply chain management.

**The Need for the Implementation of the Supplies Management Component**

At the time of implementing the program, the essential medicines for the treatment of pneumonia (Amoxil DT) and diarrhoea (ORS/Zinc co-pack) were not registered for distribution in Tanzania. The first step therefore was to get these products registered for distribution by Tanzania Food and Drug Authority (TFDA). A major delay was however experienced it took a year of lobbying and advocacy to see change. The pneumonia products were finally registered in 2014 after a year of continuous follow up with TFDA by UNICEF as well as coordinated advocacy with MoHSW, CHAI and UNCoLSC (two types of Amoxicillin DT manufactured by CSPC Pharmaceutical Group Ltd were registered; China- 125mg and Medopharm, India- 125mg and 250mg). The Zinc/ORS co-pack however took a bit longer and was reported to have been recently registered (2015) with a local pharmaceutical company, Shelys Pharmaceuticals, being licensed to co-package the products. The supply management aspect of the program thus had expected results including (i) Having over the counter availability of zinc, (ii) Having frontline community health workers adequately stocked with ORS, zinc and amoxicillin, (iii) Having facilities adequately stocked with ORS, zinc and amoxicillin, (iv) Having a policy on community-based treatment of pneumonia in place, (v) Having amoxicillin dispersible tablets and ORS/zinc co-packs included in the Essential Lists of medicines in Tanzania, (iv) Having amoxicillin dispersible tablets and ORS/zinc co-packs products registered in the country and (vii) Having national procurement of amoxicillin and ORS/zinc co-packs meet projected needs.

**Supplies Management Activities Implemented Under the Program**

As indicated, a major delay was experienced in getting the recommended essential medicines for the treatment of pneumonia and diarrhoea registered in the country. In the interim while the program waited for the registration and licensing of the recommended products, UNICEF with the help of MOHSW obtained a special importation permit for ORS/Zinc co-packs from Universal Corporation Limited and procured them for the public sector in Tanzania. All products from the 2014 shipment were delivered to MSD and distribution done in 2015. UNICEF also worked
closely with the private sector- the Pharmaceutical Council - to ensure the new formulations were available at Accredited Drug Dispensing Outlets (ADDOs) (small pharmacies under Public-Private partnerships making essential medicines available in rural villages).

**Effectiveness of the Supplies Management Activities**

Following the delay in the acquisition of the recommended medicines for the management of pneumonia and diarrhoea, interim solutions were provided as indicated above. Though this was the case, it was found that there was low uptake in the products’ used because training sessions had not been carried out. Following the training sessions and educational initiatives however, change was seen, especially in the uptake of zinc in the treatment of diarrhoea. Co-packaging the two products (ORS and Zinc) also helped in driving the usage of zinc. In addition to that, it was noted that, there has generally been a constant supply of these medicines in the health facilities. However, a closer look at the supply in the specific regions where the project was implemented, noted that Njombe and sections of Iringa and Mbeya, experienced shortages where the supply did not meet the demand, or the medicines, (especially amoxicillin) took a bit longer than expected to reach the facilities in the area. Key challenges reported by caregivers when acquiring drugs for the treatment of diarrhoea and pneumonia included the long distances to the point of supply (reported by over 30% of the caregivers, and more so, in the acquisition of the diarrhoea medicines- 41% of the caregivers reported that the distance to the outlets was too far), the unavailability of the drugs at the outlets (cited by over 18% of the caregivers, and more so, for pneumonia medicines- 24% of the caregivers reported that the drugs were unavailable) and the cost associated with their acquisition (cited by over 5% of the caregivers, and more so, for the acquisition of pneumonia medicines- 30% of the caregivers indicated that the cost was high). The long distance to the outlets was pronounced in Mbeya, while the unavailability of the drugs in the outlets was mostly felt in Njombe. The high cost in acquiring the medicines was evenly pronounced in the 3 intervention regions, but more so in Iringa and Njombe.

The study sought to understand the challenges that were being experienced in the acquisition of specific products for the treatment of diarrhoea and pneumonia. Concerning ORS, only 7% of the caregivers reported that they had tried to purchase the product and it was not available. The unavailability occurred within the last 3 months preceding the data collection. Further, caregivers who had tried to purchase ORS and it was not available indicated that they had mainly tried to purchase the same from a public health facility (65%). In addition to that, the caregivers reported that the situation was improving (67% indicated that the situation was better than the previous year). With zinc, it was noted that majority of the caregivers (78%) had never tried to purchase the product for managing diarrhoea. This was an indication either that there was a low supply of the product, or that caregivers were opting for other products to manage diarrhoea in their children. Only 4% of the caregivers had tried to purchase the product and it was unavailable and more so, within the last 3 months preceding the data collection process. Similar to ORS, caregivers who had tried to purchase zinc and it was not available had mostly tried purchasing it from a public health facility (62%). This cut across the 3 intervention regions. When asked about the number of times the caregivers had tried to purchase zinc and it was unavailable, it was noted that this had largely happened only once (84%) and that the situation was better (reported by 66%) than the previous year. With regards to the ORS/Zinc co-pack and similar to zinc, majority of the caregivers (87%) indicated that they had never tried to purchase it. This was
indicative of either a low uptake of the product or an issue with supply in the intervention regions. For those that had tried to purchase it and it was unavailable (3% of the caregivers), majority (36%) indicated that they had tried to do so within the last 12 months. Similar to the other products discussed above, this was largely at public health facilities (reported by 64% of the caregivers). Similar to ORS and zinc, caregivers had largely tried to purchase the ORS/Zinc co-pack only once and did not find it (reported by 83% of the caregivers). In addition to that, the situation was reported to have improved than the previous years (reported by 60% of the caregivers).

For pneumonia, the challenges reported by caregivers in the acquisition of amoxicillin mainly included the long distances to the outlets where these drugs were available (reported by 33% of the caregivers and more so in Njombe), the high cost of acquiring the drugs (reported by 30% of the caregivers, and more so in Mbeya) and the unavailability of the drugs at the outlets (reported by 24% of the caregivers, and more so in Njombe). When asked whether they had tried to purchase the medicine (Amoxil) and could not find it, majority of the caregivers (83%) indicated that they had not. A sizeable number however (17%) indicated that they had tried to purchase the product and it was unavailable. In addition to that, majority of these caregivers (68% of those that had indicated that they tried to purchase the medicine and it was unavailable) indicated that they tried to do so at a public health facility. This notwithstanding, majority of these caregivers (65%) indicated that the situation in acquiring drugs was better than the previous year; with the exception of Njombe region.

**Efficiencies Observed with the Supplies Management Activities**

The program in Tanzania mainly focused on supporting the supply management of essential medicines for the treatment of diarrhoea and pneumonia in the public sector. However, for a more effective and inclusive approach, UNICEF in collaboration with MOHSW and UNFPA held a successful sensitization during the program implementation for inclusion of Amoxil DT, Zinc/ORS co-packs and other family planning and life-saving commodities in the ADDO list of medicines (ADDOs are small pharmacies under Public-Private partnerships making essential medicines available in rural villages). This ensured a larger coverage and availability of these products to the population. In addition to the ADDO outlets, the private sector in general also received support from what was initially intended for the public sector. Training on supply chain management was also done targeting teams that dealt with supply management for a more effective management of the supply of the medicines to meet the demand.

**Sustainability of the Supplies Management Activities**

In order to ensure that the gains made from the program are sustainable, a number of hitches experienced under this program need attention. First, challenges experienced during the program implementation where the report and request forms (R & R forms) for the medicines had not been updated to reflect and include the new products would need to be done. This would work towards ensuring a more streamlined approach during supply of medicines and reduce chances of over-estimation or under-estimation. Secondly, it would be necessary to strengthen the availability of drugs through private sector channels in order to meet the demand and increase reach. Thirdly, it would be ideal to assure supply of essential medicines and the sorting out of administration issues between the MoHSW and the central supplies management unit. It
was reported that MoHSW had amassed a huge debt in clearance, port, storage and distribution of medicines and medical equipment to MSD. This situation led to a long delay at the port and MSD due to lack of funds at MSD.

Public-Private Partnership Activities
The intention of the activities under the Public-Private Partnership Activities was to strengthen public-private partnerships and make better use of private sector channels for appropriate diarrhoea and pneumonia treatment.

The Need for Public-Private Partnership Activities in Tanzania
The program in Tanzania was mainly led through the MoHSW where a multi-sectored approach was adopted in both the public and private sectors as discussed in the sections above. There was therefore a participatory approach adopted, which worked towards achieving the expected results under PPP in the program. These included (i) Having key supportive policy changes implemented as necessary and (ii) Having the co-packaged ORS and zinc and amoxicillin DT readily available.

Public-Private Partnership Initiatives Implemented in Tanzania
The MOHSW, the lead implementing partner of the program in Tanzania actively involved other partners in the private sector. First, the ADDOs, an initiative led by the Pharmacy Council with technical assistance from the Management Sciences for Health (MSH) to train and licence small, privately operated retail outlets in rural areas to increase availability and accessibility of key essential medicines, were incorporated in the program. Initially the ADDO medicines list included Amoxicillin syrup, Zinc and ORS as separate drugs. However, in order to ensure the new diarrhoea and pneumonia treatment formulations penetrated the private sector, the MOHSW in collaboration with UNICEF and UNFPA held a successful sensitization meeting in 2015 to include Amoxicillin 250mg DT, Zinc/ORS Co-Packs and other family planning lifesaving commodities included in the ADDO list. It was noted that MSH was planning to work through ADDOs to improve community access and awareness to these new products to treat childhood pneumonia and diarrhoea. They would provide trainings, technical follow up and monitor the utilization of the new products. The coverage area was indicated as being the UNICEF supported districts where about 700 ADDOs would be covered in Mbeya, Iringa and Njombe regions. Secondly, as indicated in the preceding sections, UNICEF procured commodities only for the public sector. However, since the beginning of the project, UNICEF had been working collaboratively with local private Pharmaceutical Companies and suppliers of Zinc/ORS Co-packs and Amoxicillin 250 mg DT. Several meetings and communications were reported to have taken place to inform them about upcoming activities which would ultimately create demand of the recommended essential medicines.

Effectiveness of the Public-Private Partnerships Implemented
From findings of the evaluation and as discussed in the preceding sections, a number of results were realized through public-private partnerships (PPP). In demand generation for instance, a number of private organizations were reported to have partnered with the Ministry of Health not only in the planning phases of the demand generation activities, but also in their execution. In addition to that, through close collaboration with the Ministry of Health and relevant bodies, the
recommended medicines for the treatment of diarrhoea and pneumonia were registered and procured for distribution. The government was also reported as working closely with the private sector to ensure continued availability of the essential medicines after the program comes to an end.

**Efficiency of the Public Private Partnership Initiatives**

Through the involvement of the private sector, potential main suppliers for Amoxicillin DT were identified (Moraf pharmacy and Salama pharmaceuticals, and for ORS/Zinc co-packsis Shelys pharmaceuticals). Immediately after registration, both suppliers of Amoxicillin DT were reported to have imported the medicine and distributed them to the private pharmacies. This would supplement the efforts that were being made through the public sector. In addition to that, findings from the evaluation indicated that MSH had planned to have sensitization meetings with the large regional suppliers in Mbeya, Iringa and Njombe regions to order diarrhoea and pneumonia commodities from the national suppliers to ensure availability of these products to the ADDOs. Also, and in regards to the dIMCI training that was implemented for frontline health workers, the government was able to mobilize a GFATM (Global Fund) grant as well as other partners such as World Vision, Tibu Homa (URC/USAID) and EGPAF through PPP to support this initiative. This resulted in more coverage of the training (23 districts) in addition to the 6 districts covered through the DFATD funding.

**Sustainability of the Public Private Partnership Initiatives Implemented**

Though there were key achievements made through PPP, findings from the evaluation indicated that more efforts to encourage PPP were needed. Coordination among the MoHSW and the partners were mentioned as not functioning well; national policies and programs were reported as not being shared with everyone involved for more informed efforts. In addition to that, activities related to diarrhoea and pneumonia implemented by other NGOs were reported as not being shared widely. Possibilities therefore existed of duplicating effort. UNICEF reported having repeatedly requested for the formation of a national diarrhoea and pneumonia working group for more coordinated and consolidated efforts but this was yet to be honoured.

**c. Focus on Ethiopia**

The program in Ethiopia, similar to the other countries, was interested in finding solutions to the problems caused by pneumonia and diarrhoea in the country. Ethiopia was tasked with the same responsibilities of generating demand for essential commodities used for the treatment of pneumonia and diarrhoea, improving service delivery, targeting supplies management and finally, engaging in public private partnerships to support the processes. The health sector in Ethiopia is managed in a decentralised manner where Regional Health Bureaus oversee service delivery, adapting approaches as needed to cater for geography or population density. As such, Health Extension Workers are found in the communities providing care under a model that was created under the principle that if the right health knowledge and skill is transferred, households can take responsibility for producing and maintaining their own health. This project came amidst Ethiopia’s national scaling up of iCCM and critically helped to consolidate iCCM in over 200 woredas. Additionally, it helped to engage the same approach in other areas as well. The project was implemented in over 200 woredas in 23 zones of Oromia, SNNPR, Amhara and Tigray regions. A third of these were rural woredas in Ethiopia. The areas were selected based on
contribution to national mortality and morbidity; agrarian society and being prone to drought. The project supported more than 5,101 health posts across the four regions, benefiting an estimated 31,021,899 people and 4,418,317 children under the age of five. In total, the project targeted 25 million people out of which 4 million were children under the age of 5 years. Out of this, it was reported that an estimated 1 million under-five children benefited from iCCM in the project period. Under this program, over 10,000 HEW were reported to have been trained with emphasis to the updated protocol of case management of diarrhoea and pneumonia. Findings on the thematic areas of focus are summarized below.

**Demand Generation – Communication for Development in Ethiopia**

Demand generation was targeted at the caregivers of children under 5 years as well as their families. This component needed to increase public awareness and generate demand for appropriate diarrhoea and pneumonia care seeking among providers and caregivers of children under five years old.

**The Need for the Demand Generation Activities**

The demand generation component was an important one for this program based on the assumption that increases in the levels of knowledge, positive improvements in the attitudes and opinion would create demand for services; which ultimately, would lead to a reduction in morbidity and mortality. Demand generation was necessary to create an environment that encouraged individuals, families, and communities to act positively for their health and to access and advocate for quality health services. With reference to the context in which the program was operating under, and more so on household dynamics, it appeared that decision making especially on financial issues is a joint decision in the household. This was observed in 46% of the households where caregivers of children under 5 years were interviews and was more prominent in Amhara (60%) and Oromia (53%). In SNNP and Tigray, decision making was found to be predominantly a male decision. That notwithstanding, the care giving role in the household was found to be predominantly a female responsibility, as was evident through the household interviews carried out (all caregivers in the households targeted were female). In the target regions, 33% of the caregivers indicated that their children had suffered from diarrhoea within the last three months preceding the study. No regional variances were observed in the incidences of diarrhoea. However, it was noted that treating these incidences of diarrhoea has not always been easy, creating the need for the program. It was apparent that in the past, caregivers did not consider diarrhoea to be a serious illness that deserved medical attention. Issues around cultural beliefs and opinions have been prevalent where caregivers believed that decreasing the amount of food intake would stop the diarrhoea. Issues were also observed with the distance to health facilities; an issue that tended to affect care seeking behaviour. Then there was an issue with compliance to treatments, which was low and which was exacerbated by non-compliance by health professionals themselves in drug prescriptions. Further, there was low care seeking behaviour driven to an extent by low awareness about childhood illnesses as well as parental negligence. This awareness and low care seeking behaviour was further compounded by the male attitude towards childcare in the communities as well as the issue of polygamy that strained the resources of the household. Then there were issues of families disintegrating after divorce, which in turn affected the kind of care that the affected children were able to get. Further, the issue of child spacing and family planning equally emerged as some of
the compounding factors because the mothers with this burden of taking care of the young ones are overburdened with other responsibilities. Lastly was the issue with the perception around pneumonia where it was not considered a serious matter by the communities to warrant any medical attention. From the information obtained from the caregiver interviews, many cases of pneumonia did not get medical treatment as result of different reasons, including lack of awareness (mentioned earlier) and the shortage of finances to buy medicines. Thus, it is clear that the program implementers had many awareness issues to address, which were intended to result in improvements in care seeking behaviour. Details of these awareness creation activities that were implemented are elaborated in the next subsection.

Demand Generation Activities Implemented Under the Program

This demand generation component had various tasks attached to it. The first was to create a media awareness panel that needed to steer discussions involving various stakeholders. It was confirmed that a media awareness panel was organised and aired through the Ethiopia Broadcasting Corporation (EBC) television involving six experts drawn from the Federal Ministry of Health (FMOH), UNICEF, SCI, JSI/L10K. Further, the program needed to produce and disseminate advocacy material and creative briefs on diarrhoea and pneumonia. In total, 500 iCCM advocacy briefs were printed and distributed to sensitize the Regional Health Bureaus (RHBs), Zonal Health Departments (ZHDs) and Woreda health officials. The main reason for this was to garner ownership in the program for a higher impact. The advocacy briefs included information on current national iCCM implementation (on pneumonia and diarrhoea), major bottlenecks and action needed. Additionally, under this component was the need to support special communications strategies during Child Health Days and supplementary immunization campaigns and provide support to the national media campaigns. Under this, special communications strategies were adopted during these days, at national, regional and Woreda level with UNICEF as well as with its implementing partners. Further, the program was required to adapt IEC/BCC material, print these and distribute these to the project areas. It can be confirmed that a national IEC-BCC (Family Health Guidelines – FHG) tool was revised to include updates on diarrhoea management using ORS and Zinc. Birth registration information was also included in addition to information to promote care-seeking behaviour around ORS and Zinc. In total, 331,000 revised FHGs were printed and distributed in the project areas. Review and sensitisation meetings were also conducted to enhance the health extension workers (HEW) capacity to effectively work with the Health Development Army (HDAs) on the danger signs recognition and prompt care seeking. Under this, performance review and refresher training was conducted for over 10,300 HEWs and HEW supervisors to enhance their capacity to effectively work with HDAs on danger signs recognition and promoting prompt care seeking. Finally, the program was responsible for disseminating on radio, messages on danger signs to watch out for pneumonia and diarrhoea. The evaluation team saw the radio messages that were created and information shared on 188 radio spots in two local languages that were aired on pneumonia and diarrhoea. These were aired on EBC and Fana BC in addition to Oromia TV and Radio organisation.
The Effectiveness of the Demand Generation Activities

Based on these activities, it was anticipated that the levels of awareness and care seeking behaviour around diarrhoea and pneumonia would improve and this was assessed by the external evaluation team. A number of results were observed. First, it emerged that 52% of the households had obtained information on disease management for their children under the age of 5 years. This state of affairs was confirmed in the key informant interviews where it was noted that the caregivers were targeted for additional training on childhood diseases and nutrition. It was therefore not a surprise that from these sources of information, the caregivers trusted the frontline workers (47%) and the doctors/medical officers and nurses in public facilities (35%) more than they trust any other source of information. Roughly about 67% of the caregivers mentioned that they had ever gotten information about the danger signs of and appropriate treatment for diarrhoea. This information was mentioned as having been obtained from a frontline health worker in 58% of the instances, and from a doctor, nurse or clinical officer in 47% of the instances. With pneumonia on the other hand, approximately 35% of the caregivers mentioned that they had ever gotten information about danger signs of and appropriate treatment for pneumonia. The source of this information was from a frontline health worker in 61% of the instances. While the level of awareness on certain issues was not completely striking, the key informants who were program implementers did agree that some improvements were noted in recent years.

Secondly, as mentioned in the previous section, it was noted that 33% of the caregivers mentioned that their child/children had suffered from diarrhoea within the last three months. Additionally, when these caregivers first realized that their child had diarrhoea, 47% took their child to a health facility. What was however worrying was that about 12% did not do anything but rather, decided to wait and see what would happen; and this figure was highest in Oromia (21%) For the few that mentioned they would wait and see, around 64% indicated that they would wait for more than a day before seeking help. The evaluation team sought to find out whether the caregivers were aware of the signs to look out for to judge whether the diarrhoea their child was suffering from was mild or serious. About 34% of the caregivers mentioned they could judge the gravity of the diarrhoea episode by how watery the stool is, 22% by how frequent the bowel movement were, while 13% mentioned vomiting or fever in the child. Fewer caregivers could identify with shriveled skin or sunken and hollow eyes. With pneumonia on the other hand, only about 30% of the caregivers identified fast/difficult breathing while 13% mentioned chest in-drawing as danger signs for which they would seek immediate medical attention for their child under the age of 5 years. Out of these, only 31% of the caregivers mentioned that their child had an episode of pneumonia in the last 1 year. From these, 61% indicated that they sought medical attention immediately. However, out of these, 16% indicated that they waited for a few hours before seeking medical attention, while 15% waited for a day or two before seeking medical attention. About 7% of the caregivers waited longer than 2 days but not more than a week before seeking medical attention. For the portion that did not seek medical attention - majority mentioned that they used local home remedies. All the same, the key sector players were of the opinion that care seeking behaviour has improved. It was evident that care seeking behaviour varied from condition to condition. It appeared that caregivers were more likely to seek medical attention in the event of pneumonia than with diarrhoea. All in all, the key informant interviewed
for this study mentioned that they had observed increases in the number of patients that get treated in health centres and posts from the moment the iCCM program was launched. This thus goes to show the power of communication in addressing health issues.

Thirdly, the study also sought to understand the level of awareness on products used for the treatment of diarrhoea in children under the age of 5. It emerged that 85% were aware of ORS, but less than 20% were aware of zinc or the ORS/Zinc co-pack. Nevertheless, awareness of the ORS/Zinc co-pack was highest in Oromia (29%) and SNPN (26%). Just about 60% of the caregivers got to know about ORS from a doctor, medical officer or nurse in a public health facility. On the other hand, 44% of the caregivers mentioned that they got to know about the product from a frontline health worker – especially in Amhara and Tigray regions. The caregivers got to know about ORS more than 3 years ago, signifying that there were efforts that were happening prior to the program that led to this level of awareness about the product. Knowledge about zinc on the other hand was obtained from similar sources as ORS where doctors, medical officers and nurses in public health facilities were mainly mentioned together with frontline health workers. With zinc, an interesting trend was observed where 36% of the caregivers cited media advertisements as the source of this information, and predominantly so in Amhara, Tigray and SNNP regions. It was noted that for zinc, compared to ORS, majority of the caregivers mentioned that they became aware of the product in the last one year, an indication that this may have been a result of the program activities. With the ORS/Zinc co-pack on the other hand, information about the product was obtained from a doctor, medical officer or nurse in a public health facility (62%), from media advertisements (29%) as well as from a frontline health worker (19%). For the ORS/Zinc co-pack, more than 50% of the caregivers got to know about this product in the last one year, with the exception of Oromia. In terms of product usage for the management of diarrhoea in children under the age of 5 years, it was noted that 78% of the caregivers mentioned ORS, 9% mentioned the ORS/Zinc co-pack, while 6% mentioned zinc. About 20% of the caregivers mentioned that they had never used any of these products, an indication of the need for intensified awareness creation activities and effective supply of the products to meet the demand generated. The use of ORS/Zinc co-pack was recorded more in Oromia (19%) and in SNPN (12%). In terms of the duration of time for use of the products, 44% of the caregivers mentioned that they started using ORS over three years ago. Its use was driven by the fact that children respond faster to treatment as mentioned by 78% of the caregivers that had ever used it. Its dislike was mainly around its taste (mentioned by 25% of the caregivers). Most caregivers on the other hand started using zinc within the last two years and this was consistent across the regions. Most of the caregivers indicated that they liked the fact that children respond better to treatment (70%) and disliked it for its taste (15%) and issues on its availability (10%). Regarding the ORS/Zinc co-pack, most of the caregivers who had ever used it started using it within the last one year. They preferred it because their children respond faster to treatment (93%) and dislike it for its taste (20%). Concerning products used for the treatment of pneumonia in children under 5 years, only 20% of the caregivers mentioned Amoxil. Additionally, about 58% of the caregivers were not aware of any product. The caregivers that were aware of Amoxil got to know about it mainly from medical professionals in a public health facility (63%) as well as from the frontline health workers (34%). About 54% of the caregivers got to know about Amoxil over 3 years ago, an indication that they referred to other forms of the product since this was before the program was implemented. Major likes for Amoxil were that the children respond faster to
treatment (76%) while the major issue with this product was that it was expensive and had side effects (both at 15%). These are barriers that would need to be reviewed in future programs.

**Efficiency of the Demand Generation Activities in Ethiopia**

This program seemed to have operated efficiently in the demand generation component. With reference to the media awareness panel, it appears that a well constituted panel was formed to assist create awareness; that comprised of various partners that were interested in the subject in Ethiopia. After forming this, media briefs were created and were mentioned to have been appropriate for the target audiences and were able to garner support for the distribution of the 500 advocacy briefs to the RHBs, ZHDs and Woreda health officials. Further, the program was able to obtain governments’ support for the subject to be covered during the Child Health Days and was able to ride on the supplementary immunisation campaigns as well as other national media campaigns. Further, the program was able to adapt IEC/BCC material, print these and distribute them in the project areas. It was noted that a national IEC/BCC (Family Health Guidelines – FHG) tool was revised to include updates on diarrhoea management using ORS and Zinc. Birth registration information was also included in addition to information to promote care seeking behaviour around ORS and Zinc. In total, 331,000 revised FHGs were printed and distributed in the project areas. Additionally, while Ethiopia had been running iCCM, the program was able to provide a platform under which review and sensitisation meetings were conducted to enhance the HEW capacity to effectively work with the HDAs\(^1\) on the danger signs recognition and prompt care seeking. Under this, the program was able to achieve performance reviews and refresher training for over 10,300 HEWs and HEW supervisors to enhance their capacity to work with HDAs on danger signs recognition and promoting prompt care seeking. Lastly, the program was responsible for disseminating on radio, messages on pneumonia and diarrhoea disease danger signs. With the radio messages that the program implementation team created and shared, and which were aired in 188 radio spots in two local languages, the program was able to achieve improve the level of awareness on these diseases, improve to an extent the level of care seeking behaviour, as well as improve awareness on the products used to manage these diseases and especially on zinc and the ORS/Zinc co-pack.

**Sustainability of the Demand Generation Activities in Ethiopia**

As noted earlier, the demand generation activities were implemented in a multifaceted manner. It appears that most of the activities, especially the ones that rode on the existing iCCM would be sustainable in the long run. However, for the activities that were implemented, and in which UNICEF provided the funding and direction, such as the media campaigns, might not be sustainable in the long run, yet these were observed as having some impact in generating demand. The demand generated would only be sustainable under certain conditions. First, there is a need to review the HEWs workload to sustain and drive demand for the treatment of pneumonia and diarrhoea. Secondly, and linked to the first point, care seeking behaviour and service utilization appears low due to closures of health posts and a sustainable model needs to

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\(^1\)Information defines these as volunteer community health promoters who train model families to implement health initiatives and to serve as role models or graduated households showing benefits to their village. They are used in educating the communities where they link one model family to five other households.
be adopted. Thirdly, there is a need for male-caregiver targeted programs to handle rough terrain and also to ensure sustainability during maternity leaves and relocations. After this, there was need to facilitate a relocation plan for the frontline health workers to reduce their attrition. Lastly, awareness on pneumonia danger signs and treatment options is still low and needs to be addressed.

**Improving Service Delivery in Ethiopia**

The service delivery component was targeted at the providers of health care services in Ethiopia.

**The Need for the Service Delivery Component**

The caregivers and other community members face various challenges in accessing healthcare. About 19% of the caregivers mentioned that they lack money for treatment, 10% cited the lack of proper medication, 9% cited the lack of awareness concerning modern health matters while 3% cited congestion in health facilities as being a challenge and this resulted in delayed services. Additionally, the caregivers were of the opinion that these challenges could be improved by creating awareness about diseases and proper hygiene through community forums. Further, it was observed that there was need to provide free services to the community as well as equip health centres with better facilities as well as drugs. Thus, there was need to strengthen service delivery in Ethiopia to meet the demand generated by the communication campaign as well as the iCCM component. Specifically, this component needed to expand access to effective integrated case management at community and front-line health facility level.

**Activities Conducted Under the Program to Improve Service Delivery**

Various activities needed to be achieved under this improving service delivery component. The first, was the need to update, print and distribute iCCM/IMNCI training guides and job aids that incorporated Amoxil DT as the first line of treatment, as well as the inclusion of ARI timer for the diagnosis of pneumonia. Incorporation of Amoxil DT as the first line of treatment in the iCCM training guides and job aids was achieved. The iCCM training guides and job aids were then distributed to over 10,000 HEWs in the project areas. Further, approximately 5,000 ARI timers were distributed to assist with the diagnosis. Another item that was expected to be achieved under this component was the need to strengthen in-service and pre-service training of frontline health workers on iCCM and IMNCI in addition to strengthening their supervision and mentoring. Under this, the capacity of four health science colleges in the regions was enhanced and that a total of 74 tutor and 5,000 HEWs were trained during the program duration. Further, UNICEF provided guides, videos, laminated wall charts and teaching aids at national level. In addition to that, the program established and ensured the functionality of ORT corners and it was reported that ORT corners were established in 94% of the facilities with adequate equipment and with supervision structures to ensure continued functionality and utilisation. The program also sought to explore the non-financial incentives to motivate frontline health workers and in doing so, these were rewarded with solar radios, recognition in ARM and festivals as well as being afforded the ability to upgrade. Finally, UNICEF provided support in identifying and sharing best practices on diarrhoea and pneumonia management for which, it organised the annual best practice sharing, performance review and ownership workshops where it supported the implementing partners as well as the federal Ministry of Health in organising. It was noted that the program had a heavy leaning towards iCCM through frontline health workers (known as
HEWs in Ethiopia), in order to avail healthcare services at the household level. The role of the frontline health workers, or HEWs, was generally awareness creation and providing primary level of care at the community level. Their primary responsibility was to promote health, including education, screening, prevention, and selective clinical interventions. In Ethiopia, there is at least one health extension worker in every health care unit, who, has attained at least a grade 10 education. HEWs are recruited at the Kebele and Woreda levels to be trained and are selected by the health centre in which they are attached and are drawn from the same area. Knowledge of local language an added advantage and is one of the considerations made in their recruitment. Another key consideration made is their gender; these are mostly female informed by the notion that care giving, culturally, is largely a female role and thus needs to be matched by female HEWs. This notwithstanding, male HEWs were emerging in some areas; while majority of the HEWs were largely female (reported by 81% of the caregivers), a sizeable portion indicated that these were male in their area (19%) and more so in Oromia (29%) and Tigray (28%). Most people in the communities prefer more female HEWs. Nevertheless, male HEWs were more preferred in Tigray and this is driven by the fact that there are more male HEWs there as indicated. That notwithstanding, it might be prudent for future programs to consider having more male HEWs to compliment the female HEWs because it was observed that the female category is very fluid, which results in high attrition rates. This attrition is caused by the terrain that the HEWs need to cover which is considered large for these female HEWs. They are also selected at the peak of their reproductive age and thus cause staffing issues when they have to leave for maternity breaks. Further, they were known to relocate to other areas once they got married due to the age at which they were recruited.

The HEWs were taken through a training program which is run by trained trainers, that are trained at national level. These then roll out the training to the HEWs in the different regions. It was noted however that the implementation from the training of trainers did not go immediately to the HEWs as there was need to generate a wide database of trainers that could implement the same training across different regions. The training program was mentioned to last approximately six to ten days in a classroom environment. Training in the regions was conducted in the local languages predominant in those regions. This training program was followed up with review meetings where HEWs’ performance was monitored and corrective action taken to ensure the right application of knowledge their communities. Review meetings are essential for the experience sharing value that they add to a project implementation process. The training program that these HEWs went through covered specific issues of interest under this program. The HEWs were expected to cascade their training back to their communities by first setting up a community meeting where they would engage their community. In all the program areas, as well as the rest of the country, the training was done at the same time. The HEWs were provided with the essential supplies they needed to carry out their work after the training. They were first provided with ORS and got ORS/Zinc co-pack as well as Amoxil DT later on. HEWs carried out awareness creation exercises which covered a variety of topics around pregnancy, childcare, vaccinations among others. These were done approximately twice a week and took place in schools and other social gathering sites. The trainings were critical to training HDAs in their communities who were used to identify a model household to link other 5 households to, where awareness creation could take place. The process of training the HDAs is well structured and guided by a family health guide. Additionally, it was observed that the HEWs were supervised in
a structured manner. HEWs were linked to a supervisor who assigned them a number of health centers to track. Health professionals from the health center were also said to attend these supervision visits in addition to the HEWs supervisor. Often, the HEWs supervisor would check the case load of what the HEW had attended to as well as review the quality of service. They held review meetings where experiences were shared as well as lessons learnt. These review meetings with the HEWs supervisor happened two to three days per week, with a monthly report done after every 20 days. After six months of implementation, the HEWs were appraised based on their performance. It was noted that the review meetings formed a platform for the HEWs to air their grievances and request for additional products to support their work.

Effectiveness of the Improving Service Delivery Component in Ethiopia

The activities towards improving service delivery in Ethiopia have had various results. First, 31% of the caregivers mentioned that a HEW had come to their household to inform them about pneumonia and diarrhoea. This could be attributed to the fact that the HEWs are assigned to specific health posts and do community meetings to create awareness. It was also observed that the HEWs created awareness concerning health issues and preventive measures in their communities (mentioned by 27% of caregivers), in offering good quality services in their communities (mentioned by 19% of the caregivers) as well as enabling easy access of health centres to the caregivers (mentioned by 6% of the caregivers). It appears that this awareness creation resonated well with the caregivers because the program made it possible to avail information to the caregivers at community level and in a language that the caregivers could understand. In terms of the nature of the relationship between the HEWs and the caregivers, it was observed that most people in the different communities (75%) mostly accepted and related well with the HEWS. Further, 82% of the caregivers mentioned that HEWS had been able to alleviate or lessen challenges faced by women in their communities when seeking care for their sick children. The lowest score for this attribute was noted in Oromia and it is recommended that a review of the community’s interaction with the HEWs be reviewed to address issues that may be occurring. Additionally, caregivers provided insights on opportunities through which the services provided by HEWs could be improved. Recommendations ranged from HEWs being able to create more awareness through trainings, to offering free and good quality services, as well as HEWs being provided with enough drugs and working equipment. Thus, it is worth noting that the HEWs have been critical in meeting the demand for services created by the awareness creation exercises. However, some few considerations were made for future training programs. There were issues with the training structure and duration. In terms of the training duration, the HEWs felt that the amount of time allocated for that training program was shorter compared to the material that they were required to cover. Another issue with the training program was that it required them to use a checklist of documents in their line of work and in front of their patients which made their patients lose confidence in their ability to treat their children.

Efficiencies During the Implementation of the Service Delivery Component

The improving of the service delivery component was implemented against the backdrop of iCCM that the government was supporting. By doing so, it was able to implement important activities efficiently. However, it appears that the private sector was left out in the improvement of the service delivery component, especially considering that a proportion of the caregivers
made use of these private sector providers for treatment. Thus, it would be important to adopt an all-inclusive structure to ensure complete compliance and especially in the urban areas.

**Sustainability of the Service Delivery Component Established by the Program**

The program, by riding on iCCM was able to improve service delivery. The iCCM was majorly driven by the government and the program was thus providing structures under which the iCCM approach can yield better results especially with regard to child health. The HEWs and other health workers are paid by the government and are part of an elaborate community health provision strategy adopted by the government way before the program got implemented. Thus, the task for the program under this was to improve service delivery towards pneumonia and diarrhoea, within the existing structures. Consequently, once such structures were well documented, adopted and cascaded, it would ensure the sustainability of the program. However, a few elements were observed that could derail the sustainability of this component. First, there is fear that attention to certain messages or interventions was not given proper attention due to the message load that the HEWs have to cover; this would need to be addressed. Second, there is a need for the focus on mixed gender HEWs to cover-up for gaps caused by female HEWs during maternity and relocations. Third, there is a need to put in place and make HEWs aware of a clear structure for handling transfers and relocations that were reported to be causing high attrition. Fourth, there is a need to address supplies challenges for essential medicines. Fifth, additional support to health posts from health centers is required; further, there is a need to strengthen government health structures to establish a strong monitoring and evaluation process to ensure continued compliance. Sixth, the heavy workload for the HEWs needs to be rationalized to avoid burn-out. Lastly is the challenge with frequent training in light of assigned workload; an alternative training model needs to be pursued.

**The Supplies Management Component**

The supplies management component under this program needed to procure and make available essential medicines used for the treatment of pneumonia and diarrhoea through strengthening procurement and supply chain management.

**The Need for the Implementation of the Supplies Management Component**

As noted earlier, 13% of the caregivers mentioned that one of the challenges they faced at the facilities was stock-out of essential drugs. Stock-outs of drugs indicate challenges in the process of quantifying supplies and making forecasts of what might be required across the value chain. Further, it may indicate challenges in procuring and distributing essential products and medicines. Thus, there was need to sort out the supply chain issues to ensure that the right amount of products was procured and made available when required. Further under this program, a co-packed ORS/Zinc needed to be provided and thus there needed to be concerted efforts to enable bundling. In Ethiopia, there were discourses made for and against central bundling as well as health centre bundling of ORS and Zinc. Thus, the program needed to strengthen the capacity of PFSA for ORS/Zinc co-packaging. Finally, the program also needed to support the procurement of Amoxil DT, ORS and Zinc to be used in the implementation. Thus, the supplies management component was critical to the success of the program.
Supplies Management Activities Implemented Under the Program

A variety of supply management targeted activities were implemented under the program. These were intended to provide technical assistance to improve the quantification and forecasting for the national procurement of essential medicines. In this regard, technical and financial assistance was given to FMOH/PFSA for two rounds (one in 2013 to 2015, and another in 2016 to 2018) to support the quantification and forecasting for iCCM commodities. Further, there was need to provide technical and financial support the packaging and distribution of essential medicines and towards this end, FMOH/PFSA was supported. PFSA was strengthened to support the national co-packaging of ORS/Zinc and towards this end, 1.8 million ORS/Zinc co-packs were distributed by PFSA. There were activities that sought to check the acceptability and options for packaging. Additionally, there was need to strengthen the procurement and distribution mechanisms for essential medicines at all levels of the system through focused technical assistance. First, PFSA was provided with technical and financial support through training and supervision. Further, the program enabled the printing of the PFSA’s Standard Operating Procedure (SOP) document. Subsequently, the program facilitated efforts to strengthen the national supply chain and facilitate an experience sharing and training visits to its branches. There was also need to provide refresher training on inventory management to frontline health workers involved in iCCM/IMNCI and as a result, over 10,000 HEWs and their supervisors were trained on inventory management. It was also necessary to strengthen the regulatory capacity of FMHACA and towards this end, UNICEF placed technical assistants in this organisation. Under this, UNICEF supported FMHACA in the development of a regulatory Msc. curriculum and was also able to prioritize newly imported MNCH drugs on the fast track list. Further, it was required to support the procurement of Amoxil DT, ORS and Zinc towards which it was reported to have procured 15.3 million tablets of Amoxil DT (250mg), 4.6 million tablets of Zinc DT and 16 million sachets of ORS which were distributed by UNICEF and PFSA.

Effectiveness of the Supplies Management Activities

As observed above, the program was able to make available ORS, Zinc and Amoxil DT. First, the program was able to make sure that zinc got incorporated in the list of essential medicines. The evaluation sought to find out whether this initiative was able to make these essential medicines available at the local level. From the information provided by the caregivers of children under the age of 5 years, only 5% mentioned that they had challenges acquiring ORS because it was not available. The caregivers mentioned that they attempted to purchase or acquire ORS from a public health facility where it was not available. This was reported as having happened only once in the last one year, and that the situation and the experience of acquiring ORS was way better than it was in the previous year. However, there was an interesting twist where some program implementers mentioned that they faced shortages for ORS while others mentioned that there was excess supply for the same product. Shortages for ORS were reported in the SNNP and Oromiya regions. On the other hand, it was noted that UNICEF had excess ORS drugs that they were unable to find a need for. This depicted the fact that issues with procurement and distribution were yet to be completely resolved.

With regards to zinc on the other hand, only a negligible proportion of the caregivers indicated that they tried purchasing or acquiring zinc and it was not available. Zinc was reported to be
missing in public health facilities and this happened within the last year of the program. This notwithstanding, the low proportion of caregivers that had ever tried purchasing or acquiring zinc to treat diarrhoea could be attributed to low levels of awareness about the product, or preference to other available options for treating diarrhoea. It was observed from the key informants that this product was not available to be distributed to the HEWs immediately after their training. Further, it was observed that subsequent shortages of zinc were due to interruption in supplies and its short life span. Prescribing ORS alone without zinc was not the only challenge as it appeared that even in some other public health outlets, caregivers were advised to purchase from private pharmacies as the available product in SNNP region was about to expire.

With regards to the ORS/Zinc co-pack and as noted earlier, the program was responsible for facilitating the bundling of ORS and Zinc together to enhance the availability of both products. A significant number of caregivers (86%) indicated that they had never tried purchasing the co-pack; an indication of low levels of awareness about the co-pack. Only a small proportion of the caregivers mentioned that they tried purchasing the product and it was available (12%). About 2% on the other hand mentioned that they attempted to acquire it and it was not available. Those that could not find it tried to obtain it largely from a public health facility and this was majorly within the last one year, though there was consensus that its availability had improved as compared to the previous years. Interestingly however, there was a feeling that the ORS/Zinc co-pack was not available at the public health facilities but rather, was mainly made available in private health facilities and pharmacies. It is worth noting though, that private social marketing firms were actively involved in driving the availability and use of the co-pack and this could have contributed to the co-pack’s availability in private health facilities and outlets.

With Amoxil on the other hand, it was noted that not many caregivers were aware of the availability of the Amoxil DT that was being introduced under this program. Thus, most caregivers could only relate to Amoxil in its other forms (syrups, suspensions etc.) and even then, only 7% mentioned that they had tried purchasing or acquiring Amoxil and it was not available. Thus, insights on the availability of Amoxil DT were thus gleaned from the key informant interviews. It was evident that supply and the management of the distribution for Amoxil DT was better than that of ORS and Zinc. Though it was noted that there was some delay in acquiring the product at the beginning, as a result, the providers continued using Cotrimoxazole. There were also issues of non-compliance to the new guidelines when Amoxil DT was introduced that mired the impact that could have been expected with the introduction of this product. Further, there were concerns about the packaging and presentation of Amoxil DT as it was feared that by parents dissecting the tablet – based on the recommendation of the health providers, they were essentially running at risk of introducing other infections and diseases such as diarrhoea.

Efficiencies Observed with the Supplies Management Activities

The supplies management activities were using an approach that sought to strengthen existing structures rather than recreate new ones. This was so for most components with the exception of the procurement of Amoxil DT. For instance, technical assistance was provided to improve the quantification and forecasting for the national procurement of essential medicines. Further, the project sought to strengthen FMOH/PFSA in the packaging and distribution of essential
medicines. Additionally, PFSA was provided with technical and financial support through training and supervision. The program also enabled the printing of the PFSA’s Standard Operating Procedure (SOP) document. Subsequently, the program facilitated efforts to strengthen the national supply chain and facilitate experience sharing and training visits to its branches. Also, over 10,000 HEWs and their supervisors were trained on inventory management. Though there were gaps in distribution, these are issues that UNICEF would be able to continue providing support till 2018, especially because there needs to be a critical review of the supply and distribution chain from the national level to the local areas. PFSA was further strengthened to support the national co-packaging of ORS/Zinc. It was also necessary to strengthen the regulatory capacity of FMHACA and towards this end, UNICEF placed technical assistants in this organisation. Under this, UNICEF supported FMHACA in the development of a regulatory Msc curriculum and was also able to prioritize newly imported MNCH drugs on the fast track list. Further, it was required to support the procurement of Amoxil DT, ORS and Zinc where procured products were distributed by UNICEF and PFSA. Therefore, the program was implemented with a view of strengthening existing systems and structures to produce sustainable results.

**Sustainability of the Supplies Management Activities**

As noted in the previous subsection, the supplies management activities for the essential medicines used to treat pneumonia and diarrhoea were implemented with a view of strengthening existing systems and structures to produce sustainable results. That notwithstanding, there are a few issues that would need to be addressed for sustainability. First is the need to re-look at the transportation options for the different woredas. It was observed that some woredas did not have adequate transportation facilities to collect medicines by themselves and this may have affected distribution. It was recommended that this could be solved by having PFSA provide dedicated transport arrangements so that medicines are supplied directly to the Woredas rather than have the Woredas collect their medicines. Second is the need to learn from the distribution system for Amoxil DT and adopt it if feasible for other essential products. Third is the need to address the issue of stock-outs of essential medicines. It appears that the issue of supplies management and distribution kept on recurring for ORS and Zinc. Products expired while in the facilities and there was not a proper system to anticipate this. It may be necessary to review the inventory systems and bin cards to observe gaps and make suggestions for improvements. The supply system is really weak and it appears that linkages between the teams serving the communities and those at the national level are delinked. Lastly are the sustainability issues with respect to Amoxil DT. UNICEF handled procurement for Amoxil DT and thus, there were adequate supplies for the program. However, the other products that the government was procuring for the management of pneumonia were reported to have experienced stock outs and thus, it is not quite clear whether efforts to make Amoxil DT available would continue without support of UNICEF.

**Public-Private Partnership Activities**

There was need under this program to strengthen public-private partnerships and make better use of private sector channels for appropriate diarrhoea and pneumonia treatment. Thus, this component focussed on these partnerships and these are elaborated in detail in the subsections below.
The Need for Public-Private Partnership Activities in Ethiopia

Under this program, there was need to create and facilitate public-private partnership forums to advocate for the effective production, distribution and use of locally produced and co-packed ORS and zinc products to be made available at public, private and faith based health facilities and pharmacies. Most importantly, there was need to support the co-packaging ORS and Zinc in a diarrhoea treatment kit and co-market it through appropriate private sector channels. In addition to that, there was need to do an operational study on co-packaged ORS and Zinc. Further, there was need to conduct an orientation on the standard guidelines on diarrhoea and pneumonia management to private clinics and dispensaries.

Public-Private Partnership Initiatives Implemented in Ethiopia

As noted earlier, there was need to create and facilitate public private partnership forums to advocate for the effective production, distribution and use of a locally produced and co-packed ORS and Zinc product available at public, private and faith based health facilities and pharmacies. Towards this end, UNICEF embarked on developing a national strategy and implementation plan for PPP that was developed jointly by various partners and with the endorsement of the FMOH. In doing so, public and private sector representatives were involved in the process while UNICEF supported the process. It also provided support to FMHACA to convene pharmaceutical companies. Additionally, there was need to support the co-packaging and co-marketing of ORS and Zinc into a Diarrhoea Treatment kit through appropriate private sector channels. Towards this end, DKT, a social marketing NGO that has coverage in 95% of the urban private pharmacies and drug shops, was engaged. A different strategy was needed for the rural areas as DKT did not have adequate coverage in these areas and thus it was agreed that the public health system would be used to reach these. There was also need to collaborate with Micronutrient Initiative (MI) to do an operational study on co-packaged Zinc and ORS. This report was disseminated in March 2016 and can be found online. Finally, there was need to conduct an orientation and provide standard guidelines on diarrhoea and pneumonia management to private clinics and dispensaries. In total, approximately 500 private clinic providers were given a day’s training on diarrhoea and pneumonia standard case management that comprised of a presentation and videos, as well as exercises and discussions. Laminated job aids and protocols were provided and the regulatory heads from the regional health bureaus and zonal health departments participated in the training. Private practitioners committed to follow and use the protocol in diarrhoea and pneumonia management in the private clinics and dispensaries.

Effectiveness of the Public-Private Partnerships Implemented

The effectiveness of the public private partnerships was assessed in terms of what was achieved. There was progress towards supporting policy formulation and in providing standards and guidelines for the treatment of pneumonia and diarrhoea in children under the age of 5 years. For instance, 500 private practitioners were orientated on the standard guidelines on diarrhoea and pneumonia management to private clinics and dispensaries. The project was also able to work with the government to include Zinc and Amoxil DT in the essential medicines list, which laid a good foundation for the project. The private sector had played a great role in promoting ORS and Zinc and in creating awareness for these products, as well as in producing
and distributing these products in private sector channels. The process of laying the guidelines for the acquisition and procurement of essential medicines was beginning to bear fruit as it was noted that the process of acquisition of essential medicines was planned and done in an organised manner; and with the involvement of all partners. What however remains is to resolve the challenges with the supply chain and distribution of these products to ensure that these products are first, possible to forecast and anticipate demand, and that second, able to get to the intended users as and when needed.

**Efficiency of the Public Private Partnership Initiatives**

The process of creating public private partnerships was well implemented. It began with the identification of potential partners. Thereafter, policy formulation and the setting up guidelines for the implementation of program activities was done to form the foundation for the implementation. The assignment of roles also appeared clear with regard to this component and UNICEF played a supportive role and got the endorsement of the government. The program was able to engage private sector players in the procurement process, in co-packaging, in the awareness creation activities for these products and in their distribution in the urban areas. As Ethiopia is largely rural, there is need to strengthen the public sector distribution process to ensure that the same benefits that the private sector was able to achieve, are also realised in the public sector. Further, a few challenges were observed with regard to progress reporting by the various partners and it was felt that there was no formal reporting structure and it meant that critical information might not have been available to the government and other partners in good time.

**Sustainability of the Public Private Partnership Initiatives Implemented**

The public private partnerships can be said to be sustainable as they brought into action both public and private sector players. It created opportunities for private sector players and that was sufficient to drive sustainability through the private sector. There were efforts to support government and a critical component of this were the structures and guidelines that were created as a result. A few elements however need to be addressed that would assure sustainability. First, is the need to mop out loose products for diarrhoea management. It was observed that a number of loose products existed for the management of diarrhoea in the private sector and these were affecting the use of zinc. Second is the need for supervision of private sector to ensure compliance to the guidelines set. Third is the need to address and come up with a public sector strategy to support product distribution in the rural areas. One of the ways this could be done would be possibly engaging the private sector to cover the rural areas, and another could be through strengthening the supply chain to ensure better forecasting and product distribution. Lastly is re-looking at the procurement process and supplies management process for ORS and zinc for the public sector.
d. Focus on Niger

Niger is considered to be one of the poorest countries in the world with two thirds of the population reported to be living on less than a dollar a day. Additionally, the country’s human development capacity is the lowest in the world and is combined with a rapidly growing population. In 2013, the under-five years’ mortality rate was estimated to be at 125 deaths per 1,000 live births.\(^2\) This context is also characterized by the persistence of social norms that contribute to delayed and limited use of health services for child care. This notwithstanding, recent reports have indicated that Niger has made considerable strides in the reduction of child mortality rates in the country. The under-five child morbidity and mortality however continue to be key areas of concern with diarrhoea and pneumonia ranking among the three leading causes of under-five child mortality in the country. Studies have continued to show that this is a result of a number of factors among them including limited access to healthcare services and shortage of trained healthcare professionals. In addition to that, ignorance of key family practices, such as hygiene, and persistence of social norms further aggravates the situation. Innovative steps were therefore required to enhance demand generation and service provision of both preventive and curative services in the country through essential behaviour change.

Against this background, UNICEF implemented a Diarrhoea and Pneumonia Treatment Initiative in the country whose overall objective was to contribute towards the reduction of child morbidity and mortality through increased demand for and reliable supply of effective treatment for diarrhoea and pneumonia in the country. The program was implemented in two regions; Maradi (in the districts of Madarounfa and Mayahi) and Zinder (in the districts of Matameye and Miririah). These regions were considered due their high burden in under-five child mortality rates. It was however noted that the selection of the project regions/districts was informed by a number of other factors. A joint UN action plan for resilience building in 35 vulnerable municipalities of Niger had been developed by UNDAF and municipalities were selected based on various criteria including the vulnerability to food insecurity, child malnutrition, access to basic social services, and ongoing projects and programs in the municipalities that could contribute to resilience-building and typology of the municipalities (nomadic, sedentary, agricultural and pastoral). Seven of these municipalities were in the targeted health districts for the UNICEF program. In addition to that, UNICEF Niger was also involved in the implementation of a nutrition project implemented in 6 communes of Madarounfa, Mayahi and Matameye with the support of the European Union (EU) for acceleration towards the MDGs in Niger. These initiatives constituted an opportunity to strengthen synergies among different sections of UNICEF country program and synergies with other agencies and development partners in order to improve performance of the Diarrhoea and Pneumonia Initiative interventions and rationalize the use of resources for shared goal achievements.

Findings on the thematic areas of focus are summarized below.

**Demand Generation – Communication for Development in Niger**

Demand generation was targeted at key stakeholders in the health sector as well as primarily at the caregivers of children under 5 years and their families.

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The Need for the Demand Generation Activities

It is notable that in a bid to increase demand for care in the country, the government of Niger introduced a free healthcare policy that was meant to alleviate the financial burden of accessing healthcare for women and children. Women and children are therefore entitled to access healthcare services free of charge. However, the context of these free services is in reality a system of third-party payment where the government is supposed to reimburse health facilities of costs of care provided to children and women. This system was faced with challenges due to the refusal by the State Government to provide reimbursements to health facilities. This situation has affected the financial autonomy of these structures and has affected the quality of care, and consequently, the demand for healthcare, with the population opting to turn to local traditional healers. The implemented program was therefore necessary as it addressed underlying issues that affected care seeking behaviours. In order to enhance demand generation in the targeted regions, a number of communication for development activities were developed and implemented. These were aimed at achieving results such as (i) Having the professional associations and community leaders advocate for pneumonia and diarrhoea, (ii) Having caregivers exposed to national awareness campaigns on pneumonia and diarrhoea, (iii) Having caregivers exposed to behaviour change communication by frontline providers and local partners about the dangers and signs of and appropriate treatment for diarrhoea and pneumonia, and (iv) Having strategies prioritized to reduce non-financial and financial barriers to treatment identified by caregivers.

Demand Generation Activities Implemented Under the Program

Designed and implemented activities included social mobilization and interpersonal communication activities that were supported to generate demand for appropriate diarrhoea and pneumonia care seeking. Training of trainers’ sessions were organized at the onset for supervisors and facilitators (recruited for communication development) where topics such as interpersonal communication, social mobilization and implementation of community self-diagnosis related to Essential Family Practices- EFPs- were covered. Activities carried out comprised of environmental days, social dialogue sessions (informed by “FADA videos”- educative health films which involved villagers acting in the films produced, as well as interactive radio programs with educative content broadcast in local languages, as well as visual images of KFPs- Key Family Practices- on clothes worn by community workers as they carried out awareness campaigns), door to door counseling and public debates that aimed at generating awareness and encouraging care seeking behaviours. In addition to that, regular meetings with municipalities were also held to engage them in the promotion of KFPs for prevention and care of diarrhoea and pneumonia. Regional and local forums were also organized in collaboration with PSI to advocate for the raising of awareness on the recommended management of diarrhoea and pneumonia. Key stakeholders and traditional leaders were engaged for concrete actions to remove local barriers for adequate prevention and care to be realized. In addition to that, taking cognizance of the fact that male partners/husbands play a critical role in influencing care seeking behaviours, KFP communication on diarrhoea and pneumonia management was included in the ‘Husband Schools’. This was a UNFPA community based approach that targeted role model husbands and involved them in the support of reproductive health, family planning and the uptake of healthcare services in women and children. It allowed for local exchanges...
among health agents and men to contribute towards action planning oriented towards increasing health services utilization and therefore demand generation. The role model husbands were deemed to be most effective in encouraging and influencing other men in their communities to take up recommended preventive and curative care seeking behaviours. Further, in July of 2014, UNICEF launched a campaign for the distribution of the Zinc/ORS co-pack, which presented an opportunity for strengthening service demand through auto-referral ticket/coupon distribution and communication on free of charge access to health services for children in the household. This distribution was done through community volunteers (‘Relais’). Monitoring of the recovery of these coupons showed that caregivers were using them at the health facilities to seek care where their children were sick.

The Effectiveness of the Demand Generation Activities

From the data generated by both the program as well as the external evaluation, it appears that there are a couple of improvements observed. First, there were improvements seen in the level of awareness about diarrhoea and pneumonia among the caregivers. A significant proportion of the caregivers mentioned frontline health workers (85%) as their main source of information on pneumonia and diarrhoea, which was an indication that the demand generation activities were most effective through this channel. In addition to that, almost half of the caregivers (42%) reported that they had been visited at the households by frontline health workers where they were provided with information about the appropriate management of diarrhoea and pneumonia. Additionally, it was observed that most of the caregivers were able to identify various signs and symptoms – with the most commonly mentioned ones being how watery their child’s stool is and the energy levels of the child. However, the level of awareness of other critical symptoms was low. Examples of symptoms that received low or no mentions included the frequency of the bowel movements, bloody stool, wrinkled or shriveled skin as well as loss of appetite. With regard to the levels of awareness of pneumonia symptoms that would lead to immediate seeking of medical attention, it was observed that, a sizeable number of caregivers could identify critical symptoms for seeking immediate care among them including high fever (58%), a cough that produced yellowish or green mucus (26%) and fast and difficult breathing in the child (26%). However, there were relatively low mentions of other critical symptoms such as chest drawing (mentioned by only 19%). Only a small proportion of the caregivers indicated that they did not know of any signs (1%).

Second, from the study findings, there seemed to have been an increase in the level of care seeking behaviours among the caregivers as reported by key contacts interviewed during the evaluation process. It was reported that caregivers are now more aware of the benefits of early care seeking. Subsequently, it was noted that in addition to early care seeking, emphasis had also been placed on the need for observing prevention measures of diarrhoea and pneumonia. As a result of increased knowledge on prevention measures, the cases of diarrhoea and pneumonia for children under 5 years attended to at the health facilities were reported to have reduced. The evaluation sought to affirm these findings from the caregivers. When asked whether their children under the age of 5 years had suffered from diarrhoea within the last 3 months preceding the study, 82% indicated that their children had experienced an episode of diarrhea. This was reported consistently in the 4 intervention districts/ departments. On care seeking for the most recent episode of diarrhoea, caregivers indicated that they largely took the
child to a health facility (38%) or to a community health worker (34%). This was reported consistently across the 4 districts of intervention. However, a sizeable number of caregivers (14%) indicated that they gave their child home remedies to relieve the diarrhoea episode, or that they did not do anything (6%). This was especially reported in Madarounfa and Mayahi districts. This was an indication that there could be existing barriers to care seeking behaviours that were yet to be addressed. One of these could have been the lack of financial empowerment for the caregivers or the existing social norms where consent from the spouse is required before money is spent. Decisions on how money was spent in the household were mainly made by the spouse (74% of caregivers reported this). With regard to pneumonia, it was observed that a significant number of the caregivers (85%) sought medical attention from a health facility or from medical personnel on the most recent episode of pneumonia that their child had. However, a sizeable number of respondents (15%) reported that they did not seek medical attention, an indication that more efforts were required for effective behaviour changes in the seeking of treatment for pneumonia. For caregivers that indicated that they sought medical attention, the study sought to find out how long this had taken them. Majority (62%) indicated that they sought medical attention immediately, and more so, in Matameye. A number of the caregivers however indicated that they waited for a few hours before seeking medical attention (27%) or for a day or longer (12%) before seeking medical attention. This was especially reported in Madarounfa, Mayahi and Mirriah, and was indicative of existing knowledge gaps on the need to seek for immediate medical attention for pneumonia cases in children under 5 years.

Third, the study also explored the level of awareness for products used in the management and treatment of diarrhoea amongst the caregivers. About 88% of the caregivers were aware of ORS. A significantly lower number of caregivers were however aware about Zinc (36%) and the ORS/co-pack (13%). Interestingly, a sizeable number of caregivers (6%) reported that they were not aware of any product, and this trend was observed across the 4 intervention districts. When asked about their sources of information, majority of the caregivers (87%) reported that they got to know about ORS from doctors/medical officers/nurses in a public health facility. A minimal number of caregivers in contrast indicated that they learnt about ORS from a frontline health worker (11%), and more so, in Matameye and Mirriah. The same trend was observed in the source for information about zinc. Majority of the caregivers (75%) reported having known about Zinc from a doctor/medical officer/nurse in a public health facility. Similar ORS, a sizeable portion of caregivers (22%) also reported having received this information from frontline health worker, and more so, in Matameye and Mirriah districts. Consequently, and similar to the trend observed for ORS and zinc, a significant number of caregivers (69%) also reported having learnt about the ORS/Zinc co-pack from doctors/medical officers/nurse in a public health facility, and more so in Madarounfa and Mayahi. In addition to that, a sizeable number of caregivers (24%) reported that they learnt about the product from a frontline health worker. This was especially the case in Matameye and in Mirriah, where the impact of awareness creation of the ORS/Zinc co-pack was more effective through the frontline health workers. In addition to that, in Matameye district, it was observed that the awareness creation of this product was mainly through the frontline health workers and through doctors/nurses/medical officers in private health facilities. There were no mentions of doctors/medical officers/nurses in public health facilities, which could have been an indication that the public health facilities in the district did not have the ORS/Zinc co-pack in stock. Similarly, in Madarounfa, all caregivers interviewed reported that
doctors/ medical officers/ nurses from a public health facility were the main source of information. This was an indication that this product was only available in public health facilities. Additionally, majority of the caregivers reported that they got to know about ORS and zinc within the period the program was implemented, an indication that the demand activities implemented were effective. Interestingly however, a sizeable number of caregivers (47% and 40% for ORS and zinc respectively) reported that they got to know about ORS and zinc prior to the implementation of the program (over 3 years ago). This was an indication that there could have been other awareness campaigns carried out prior to the program implementation. A similar trend was observed for the ORS/Zinc co-pack where majority of the caregivers reported that they got to know about the product within the period the program was implemented. Similar to the trend observed for ORS and Zinc, a sizeable number of respondents (6%) also reported to have come to know about the ORS/Zinc co-pack for a longer period than the time the program was implemented in the country. Interestingly also, very few caregivers indicated that they knew about the product in Madarounfa and Matameye (only 2 respondents in each district). This was an indication that there was either very low effort to educate the communities about the ORS/Zinc co-pack or that they product was newly introduced in the districts. With regards to pneumonia, there was very low level of awareness of Amoxil as the treatment for pneumonia with only 27% of the caregivers mentioning it. Low mentions of the product were especially observed in Madarounfa and Mayahi. Medicines that seemed to be widely known for treating pneumonia in children under 5 years were paracetamol (mentioned by 69% of the caregivers), cough syrup (mentioned by 62% of the caregivers) and Cotrimoxazole (mentioned by 59% of the caregivers). These mentions were consistent across the four intervention districts. When asked about their source of information, majority of the caregivers (74%) reported that they had received this information from a doctor/medical officer/nurse in a public health facility. This trend cut across the 4 intervention districts, and more so in Madarounfa and Marahi districts. Interestingly, a sizeable number of caregivers also reported that they learnt about the product from a frontline health worker (22%). This was especially the case in Mirriah, Matameye and Madarounfa. With regards to the time period that caregivers got to know about Amoxil, majority of the caregivers (60%) reported that they got to know about the product more than 3 years ago, especially in Matameye and Mirriah districts, an indication that they referred to other forms of the product that have been in existence for longer.

Fourth, it was observed that there was a high level of usage of ORS amongst the caregivers with 92% of caregivers across the 4 intervention districts indicating that they had ever used it. In contrast however, very low numbers were reported for the use of zinc (36% usage) and the ORS/Zinc co-pack (13% usage). This notwithstanding, a significantly high usage of zinc was reported in Matameye (70%) and Mirriah (62%). Further, a sizeable number of caregivers reported using the ORS/Zinc co-pack in Mayahi (23%) and Mirriah (19%). When asked about the time they started using the products, a sizeable number of the caregivers that had reported ever having used ORS (41%) indicated that they started using it more than 3 years ago (longer that the program was implemented). This was especially so in Matameye (70%) and Mirriah (66%). Majority however reported that they started using the product within the time period the program was implemented, an indication that the demand generation activities had been effective. A similar trend was observed in the usage of zinc, where, a sizeable number of caregivers (34%) indicated that they had started using it for a period prior to the implementation
of the program. Again, this trend was observed mainly in Mirriah (40%) and Matameye (35%). Majority however indicated that they started using the product within the time period the program was implemented. With regards to the ORS/Zinc co-pack, in contrast, only a small proportion of the caregivers (7%) reported that they had started using the ORS/Zinc co-pack for a period longer than when the program was implemented. Majority indicated that that started using the product within the program implementation period, and more so, within the last 3 months preceding the study. This was especially the case in Madarounfa (100%) and in Mayahi (54%) districts. This was an indication that this was a newly introduced product in the communities. With regards to the likes and dislikes of the products, caregivers reported that they liked ORS because children respondents faster to treatment (65%), because it was affordable (34%) - especially in Mayahi (52%) and Madarounfa (47%), and also due to the fact that it was readily available (15%), more so, in Madarounfa (28%) and Mayahi (17%). Caregivers reported that they did not like the product because it had bad taste (55%), was not readily available (31%) - especially in Mayahi (48%) and the fact that it was expensive (5%) - especially in Matameye (18%). Similarly, caregivers reported that they mainly liked zinc because children responded faster to treatment (92%), had no side effects (27%), and because it tasted good (24%). Caregivers mainly did not like zinc because it was not readily available (45%) - especially in Mirriah (60%). With the co-pack, caregivers reported that they mainly liked it because children responded faster to treatment (67%), was affordable (30%), and more so in Mayahi (56%) and the fact that is caused no side effects (4%). Additionally, respondents indicated that they did not like the co-pack because it was not readily available (41%) - and more so in Mirriah (60%), had a bad taste (9%) and also because children were perceived not to respond fast to treatment (9%). For pneumonia, majority of the respondents (61%) indicated that they started using Amoxil over 3 years prior to the carrying out of the study, an indication that other forms of the product were being referred to. When asked about the likes and dislikes of Amoxil, caregivers reported that they mainly liked the product because children responded faster to treatment (92%), was readily available (26%, more so in Mayahi), and because it caused no side effects (26%). With regards to the dislikes, majority of the caregivers indicated that they mainly disliked the product because of its bad taste (49%), because it was expensive (29%, more so in Matameye), and because it was not readily available (20% of the caregivers, and more so, in Matameye- 22% - and Mirriah- 21%).

Lastly, noting the issues of availability of the essential medicines, the study sought to assess the level of preparedness for the caregivers for future episodes of diarrhoea and pneumonia. About 49% of the caregivers did not have any product that could be used for the management of diarrhoea in their households. Only 4% had the ORS/Zinc co-pack in their household which signified the need for intensified effort to scaling up demand and supply. For pneumonia, the same trend was observed; 45% of the caregivers indicated that they did not have any product in the household to manage a future episode of pneumonia in their children under the age of 5 years. Additionally, while the re-use of Amoxil or the use of antibiotics purchased over the counter is discouraged, it was interesting to note that a proportion of the caregivers still keep left over antibiotics for future use. About 33% of the caregivers reported that they had paracetamol, 22% reported that they had cotrimoxizole while 18% had cough syrup for managing future episodes of pneumonia.
Efficiency of the Demand Generation Activities in Niger

From the findings of the study, it was clear that the demand generation activities were carried out through participatory approaches, where UNICEF in collaboration with the government and other stakeholders designed and implemented demand generation activities that were deemed effective. In addition to that, taking cognizance of fact that dialogue and social learning were found to be effective channels in driving behaviour change, the community, mainly through volunteers, was actively involved in driving behaviour change. UNICEF spearheaded the implementation of continuous community based monitoring which allowed communities to make their own analysis and identify local bottlenecks that were affecting them- including access to quality health care for the treatment of diarrhoea and pneumonia- as well as identifying feasible solutions for adoption. This process has enabled communities to share and analyze knowledge, as well as to plan and to act. During diagnostic censuses for example, the most common issues raised were those related to common diseases (such as diarrhoea, pneumonia and malaria). Analysis of these issues enabled communities to understand the link between common practices, such as improper waste disposal, poor personal hygiene and nutrition, and the prevalence of these diseases. It also stimulated people to genuine behaviour change through commitments materialized through the development of a village action plan. An implementation monitoring team was put in each village involving the village chief, the health workers and community volunteers for continuity. Nevertheless, the need to ensure that communities are enabled to resolve emerging issues/ barriers is key for sustainability. Access to basic amenities- such as latrines and clean water- for instance was cited as challenges barring prevention practices of diarrhoea and pneumonia illnesses in children under the age of 5 years.

In addition to that, noting that poverty and subsequent financial constraints in the households were some of the key barriers towards access to healthcare, UNICEF incorporated the distribution of auto-referral ticket/ coupon distribution and communication on free of charge access to health care services for children in the household during the distribution campaign for the ORS/Zinc co-pack. This was done through community volunteers and saw an increase in usage of these coupons in access to healthcare. However, noting that the targeted districts were largely rural, and were therefore likely to have few or no health facilities close by, the need to ensure adequate coverage of the frontline health workers is key. The long distances to the health facilities was cited as a key challenge barring access to healthcare by the caregivers (33%). In addition to that, only less than half of the caregivers (42%) indicated that they had been visited by a frontline health worker at the household, which was an indication that the coverage of the frontline health workers was limited.

Sustainability of the Demand Generation Activities in Niger

As indicated in the preceding sections, there were notable efforts to ensure that the demand generation activities were sustainable. However, a few elements would need attention, which, if not checked, would threaten the gains made. First is the need for demand generation activities targeting all household members. Involvement of men in children’s care increases engagement and better balance in gender roles for continued sustainability. Second is the need to address the challenges of finances, hygiene and, long distances in accessing care that caregivers
continue to face. Lastly is the need to have mechanisms put in place to aid communities in the resolution of emerging issues during the community diagnostic censuses set up.

**Improving Service Delivery in Niger**

The service delivery activities were aimed at supporting Niger scale up the implementation of IMCI in primary health facilities and iCCM in underserved areas. The service delivery activities were geared towards expanding access to effective integrated treatment services for diarrhoea and pneumonia at community and front-line health facility level and further generate local evidence that would inform policy on the treatment of childhood pneumonia by CHWs. The under-five child mortality rate in Niger is one of the worst in the world as noted previously, with diarrhoea and pneumonia being among the leading contributors of the post-neonatal deaths. Limited access to healthcare services has been cited as one of the causal factors. In addition to medical facilities being limited in the country, the lack of reimbursement of the cost of care provided to children and women in the health facilities further limits the financial autonomy of these structures and affects the quality of care offered. Subsequently, social norms further aggravate the situation where many people turn to local/ traditional healers when they fall ill. Against this background, innovative steps were required to enhance service delivery in the country. This component was implemented alongside other interventions in response to this situation. It had expected results which included: having providers trained on appropriate management of diarrhoea and pneumonia, having providers equipped with appropriate equipment, materials and supplies, having frontline health workers appropriately monitored on a regular basis, having supervisors motivated to conduct regular, ongoing supportive supervision for frontline providers, and having standardized operating procedures for supervision of integrated case management.

**Activities Conducted Under the Program to Improve Service Delivery**

The service delivery component of the program was mainly implemented through the IMCI and iCCM. To achieve the expected results, a number of activities were carried out which included the deployment and training of frontline health workers on integrated case management. A total of 1,965 CHWs were reported to have been deployed by March 2015 with 215 undergoing training on iCCM on diarrhoea and pneumonia in the four project districts. In addition to that, 74 clinicians/nurses were also trained on iCCM and were also taken through an IMCI course, which included both initial skill acquisition and skill reinforcement. Periodic supervision visits that were guided by standardized supervision procedures were also made by teams trained on iCCM and IMCI case management to help in the transfer of knowledge and skills learnt through the course to day to day activities at the health providers’ places of work. Supervision visits and evaluation of achievements made were done jointly by the MOH and UNICEF and performances were expected to contribute to the national outcome for achieving the MDGs. As of March 2015, all recruited and trained CHWs were reported to have been supervised within a period of 3 months. In addition to that, regular support was reported to have been provided to the district management teams to ensure close supervision monitoring of activities. For this purpose, UNICEF recruited one national consultant located in Maradi for specific technical support of the 4 project districts. To facilitate the health workers also, health information management tools (training manuals and stock forms) were also printed and distributed in order to strengthen data collection and analysis at both the health centres and health huts for informing future
improvements in the processes implemented. Further, to strengthen processes of service delivery at the local level, regular meetings with municipalities were organized in order to engage them on KFPs for prevention and care of diarrhoea and pneumonia. Village assemblies were also organized for the recruitment of community volunteers, village chiefs, religious leaders, women leaders and youth leaders. These were involved in the management of community-based prevention and care of diarrhoea and pneumonia interventions.

As to the gender of the frontline health workers, it was observed that these were mainly female as reported by the caregivers interviewed (71%). Nevertheless, a sizeable number were found to be largely make as reported by 29% of the caregivers. This was the case in Madarounfa (44%) and Mayahi (42%). Interestingly however, when asked about their preferences for the gender of the health workers serving them; majority of the caregivers (82%) indicated that they would prefer to be attended to by more female health workers. This trend cut across the 4 intervention districts, and more so, in Matameye (86%) and Madarounfa (85%). Upon further investigation of this preference, it was found that caregivers perceived female health workers to be more understanding (44%) and capable of relating to the problems of the caregivers (22%). The need to look into gender aspects in service delivery may therefore be worth looking into in order to encourage continuous care seeking behaviour. This notwithstanding, communities seem to be largely relating well with the frontline health workers in general as reported by 84% of the caregivers.

**Effectiveness of the Improving Service Delivery Component in Niger**

The activities carried out under the service delivery component of this program were found to be effective as expounded below. First, frontline health workers were found to be appreciative of the supervision efforts as they were able to improve their skills in service delivery. However, there seems to have been a disconnect in the supervision in the private sector. As reported by one of the private partners involved in the program, no supervision had been done since the training was done. This was indicative of gaps in addressing service delivery challenges occurring in the private sector and offering of required support for a more streamlined and effective approach in service delivery. Secondly, from the findings of the evaluation, it was found that health providers have been instrumental in cascading information on best practices for managing childhood diseases (including diarrhoea and pneumonia) amongst the caregivers. About 81% of the caregivers reported that they had obtained information on disease management for children under 5 years from frontline health workers/ community health workers. In addition to that, the caregivers also reported that they trusted frontline health workers/ community health workers the most as their source of information (reported by 77% of the caregivers). Third, from findings of the evaluation, it was evident that health providers, and more so, frontline health workers, were perceived to have alleviated or lessened the challenges faced by caregivers in communities during care seeking (reported by 98% of the caregivers). This notwithstanding, there is a need to scale up the level of contact with the caregivers for more effectiveness. Less than half of the caregivers (42%) have for instance been visited at the household to be educated about diarrhoea and pneumonia disease management.
Efficiencies within the Implementation of the Service Delivery Component

It was remarkable that supervision visits were made jointly with the MOH which created efficiencies during the supervision visits. In addition to that, and with the objective of ensuring close supervision monitoring of activities, UNICEF recruited one national consultant to offer technical support in the 4 intervention districts. This model was found to be effective as the impact was felt on the ground.

Sustainability of the Service Delivery Component

A few elements were observed that touch on the sustainability of the program in Niger. First, it was noted the frontline health workers carried out regular knowledge transfer sessions with the caregivers. As a result, the workers have been able to impact knowledge to the caregivers while also gaining mastery of the skills themselves. Secondly, whilst efforts were found to have been put in place to ensure regular supervision and support in the public sector, the same could not be said for the private sector. There seems to have been a lapse in the integration of supervision visits in the private sector as was evident from one of the private partners involved in the program. Taking cognizance of the fact that public health facilities are limited in Niger, the need to ensure the incorporation of the private sector in health interventions is key for a more streamlined approach in service delivery. This would also increase the chances for more sustainable results.

The Supplies Management Component

The supply management component of the program needed to ensure that the recommended medicines for the treatment of diarrhoea and pneumonia were included in the list of essential drugs of the National Office of Pharmaceutical and Chemical Products (ONPPC). At the time of implementing the program, the essential medicines for the treatment of pneumonia and diarrhoea (Amox DT, low osmolarity ORS and other drugs) had not been included in the list of essential drugs of ONPPC as indicated. This was therefore one of the key achievements that needed to be made. In addition to that, and as indicated in the preceding sections, the financial autonomy of health facilities was affected by lack of reimbursement for costs incurred during the provision of free health care services to children and women in the country. As a result, this affected the renewal of supplies of essential drugs needed for the effective management of illnesses, including treatment of pneumonia and diarrhoea. The supply management component expected to achieve a number of results including: (i) Having over the counter availability of zinc, (ii) Having frontline community health workers adequately stocked with ORS, zinc and amoxicillin, (iii) Having facilities adequately stocked with ORS, zinc and amoxicillin, (iv) Having a policy on community-based treatment of pneumonia in place, (v) Having amoxicillin dispersible tables and ORS/zinc co-packs included in the Essential Lists of medicines in Niger, (vi) Having amoxicillin dispersible tablets and ORS/zinc co-packs products registered in the country, and (vii) Having national procurement of amoxicillin and ORS/zinc co-packs meet projected needs.

Supplies Management Activities Implemented Under the Program

To achieve the expected results, a number of activities were carried out. To begin with, the MOH in Niger included amoxicillin dispersible, low osmolarity ORS and other drugs in the list of essential drugs of the ONPPC as a result of advocacy from UNICEF. This was achieved through
the close partnership that UNICEF has had with the Ministry, and particularly in the topic of child health. Also, UNICEF launched a Zinc/ORS co-pack distribution campaign during ‘Child Survival weeks’ in Niger that aimed at improving access/ availability and correct treatment of diarrhoea in families. This campaign took place in the 4 districts targeted under the program. Villages that were given priority were those that were out of reach of a health facility (6km or more). In addition to that, reports indicated that there had been a continuous ordering and supply of essential commodities for the management of diarrhoea and pneumonia in the 4 target districts, both using funding from UNICEF and other sources. A strategic partnership with PSI, an NGO that focuses on improving the availability and use of ORS/Zinc through engaging caregivers, paternal grandparents and community leaders, was for instance forged. A preliminary analysis of the impact of this strategic partnership showed that there was an increased interest from the communities in terms of participation and compliance during the implemented diarrhoea and pneumonia campaigns.

**Effectiveness of the Supplies Management Activities**

It was notable that UNICEF worked with other partners, including MOH in the provision and distribution of the essential drugs for the treatment of diarrhoea and pneumonia to meet the existing needs. During the distribution of the drugs in some instances, opportunities to create awareness amongst the communities on products distributed were sought. In addition to that, the joint efforts in the distribution of supply of the essential medicines also seemed to have been effective. There were reports that whilst supply of the essential medicines to the health facilities and frontline health workers were made based on the stocks available, the needs on the ground were also put into consideration. This notwithstanding, cases of stock-outs and delays in supply were reported in some districts. The supply of Amoxil seems to have been the most affected. In addition to speaking to health providers, insights were also sought from the caregivers on challenges experienced during the acquisition of the essential medicines. For diarrhoea, key challenges included drugs not being readily available (reported by 47% of the caregivers, and more so in Mirriah). Additionally, long distances to the outlets where the drugs were available was also cited as a challenge (reported by 44% of the caregivers, and more so in Mayahi) as well as drugs being expensive (reported by 13% of the caregivers, more so in Matameye). For Pneumonia, key challenges cited included drugs being expensive (reported by 38% of the caregivers, more so in Matameye), as well as long distances to the outlets where the drugs were available (reported by 33% of the caregivers, more so in Mirriah and Matameye). In addition to that, the unavailability of the drugs was also cited as a challenge (reported by 30% of the caregivers, more so in Madarounfa and Mayahi). With regards to specific products, only 11% of the caregivers reported that they had tried to purchase ORS and it was not available. This was reported to be largely within the last 3 months preceding the study. In addition to that, caregivers who had tried to purchase ORS and it was not available indicated that they had largely tried to purchase it from a public health facility (88%), and that this had largely happened only once. The situation was reported to have improved/ was better than the previous years by 82% of the caregivers. With regards to zinc, majority of the caregivers (68%) had never tried to purchase the product for managing diarrhoea, an indication of low levels of awareness of the product, issues with its supply or that caregivers were opting for other products to manage the illness. About 10% of the caregivers had tried to purchase the product and it was unavailable and more
so, in Mirriah. The unavailability was largely within the last 3 months preceding the study, and had largely occurred in a public health facility. The unavailability of zinc was reported to have mainly happened once and the situation was reported to have largely improved from the previous years (reported by 81% of the caregivers). For the co-pack, and similar to zinc, majority of the caregivers (92%) indicated that they had never tried to purchase it. For the few that had tried to purchase it and it was unavailable (4%), majority (54%) indicated that they had tried to do so within the last 3 months preceding the study largely from a public health facility (reported by 75% of the caregivers) and had mainly done so only once. However, a sizeable proportion of the caregivers (29%) indicated that they had tried to purchase the product twice and could not find it, mainly in Mirriah. Nevertheless, the situation was reported to have largely improved than the previous years (reported by 50% of the caregivers). However, a sizeable proportion of the caregivers (29%) indicated that the situation was worse, and more so, in Mirriah (33%) and Matameye (25%).

For pneumonia, the challenges reported by caregivers in the acquisition of Amoxil mainly included the cost of acquiring it (reported by 38% of the caregivers, more so, in Matameye and Mirriah). Also, long distances to the outlets where these drugs were available was cited as a challenge by 33% of the caregivers, more so in Mirriah and Matameye. Additionally, 30% of the caregivers reported that Amoxil drugs were not readily available, more so in Madarounfa and Mayahi districts. When asked whether they had tried to purchase Amoxil and could not find it, majority of the caregivers (85%) indicated that they had not. A sizeable number however (15%) indicated that they had tried to purchase the product and it was unavailable. In addition to that, majority of these caregivers (42% of those that had tried to purchase the product and it was unavailable) indicated that they tried to do so at a public health facility. Majority (37%) indicated that they had tried to do so twice, and more so in Madarounfa and Matameye. In addition to that, a sizeable number of caregivers (28%) indicated that they had tried to do so three times, and more so in Mayahi and Mirriah. This notwithstanding, majority of these caregivers (81%) indicated that the situation was better than the previous year.

Efficiencies Observed with the Supplies Management Activities

It was notable that UNICEF was working with other partners, including MOH in the provision and distribution of the essential drugs for the treatment of diarrhoea and pneumonia to meet the existing needs. The supply system was decentralized such that the supply of the essential medicines was done up to the community levels. This system was found to be effective in ensuring that the medicines reached the community levels where they were needed the most. Whilst the joint management of purchased and donated drugs was found to be effective in assuring constant supply, it was found to be creating confusion in the actual use of products by the beneficiaries. The packaging was for instance found to be different for the same product (since the suppliers were different) and this brought about discrepancies since caregivers expected the same products they were educated on. This posed a risk of disruption in medicine demand and supply in general.

Sustainability of the Supplies Management Activities

In order to ensure that the gains made from the program are sustainable, a number of hitches experienced under this program would need attention. First, as mentioned in the previous
section, variances seen in the packaging of the essential products supplied for managing diarrhoea and pneumonia would need to be standardized in order to avoid confusion which would hinder uptake. In case of changes, it is recommended that awareness creation is made on the same to avoid disrupting the demand and supply processes. Second, it was notable that the supply of the essential medicines was streamlined to include the private sector. Nevertheless, challenges were reported in the timely provision of products to re-stock. This was especially so for zinc and Amoxil. It was also notable that the supply of the ORS/Zinc co-pack was missing in this sector, a gap that would need to be addressed for more effective management of diarrhoea cases, especially since zinc was taking time to re-stock. Third, it was notable that the distribution of the essential medicines was not harmonized with the facilities receiving them. In some instances, the supplies would be delivered without the relevant personnel being informed. This posed the challenges of the supplies not reaching the required departments and being used for the intended use. The need to harmonize distribution processes with the facilities would therefore be necessary for a more effective approach. In addition to that, the same challenge reported in the private sector was also seen in the public sector where delays in the supply of Amoxicillin were reported. A more streamlined approach of managing demand and supply of the essential medicines at the facilities is therefore necessary to avoid prolonged periods of stock-outs. Lastly, it was found that despite training sessions having been carried out at the onset, knowledge gaps still existed on the targeted population for the essential medicines for treating diarrhoea and pneumonia (children under 5 years). In Mirriah for instance, some cases were found where the medicines had been administered to adults, yet it was intended for children. This was an indication of the need for scaling up continuous supervision and support for the health providers at the facilities to avoid misuse of drugs.

Public-Private Partnership Activities

The intention of the activities under the Public-Private Partnership Activities was to explore and strengthen public-private partnerships and make better use of private sector channels for appropriate diarrhoea and pneumonia treatment. It was however noted that the private sector in Niger was weak and its involvement in the program was therefore limited. The program was however implemented in a collaborative approach where stakeholders from different quotas were involved in the implementation of various activities planned. Collaborative approaches were therefore pursued mainly done through the government, civil society and development agencies operational in the country.

The PPP component of this program aimed at: (i) Having key supportive policy changes implemented as necessary and ii) Having the co-packaged ORS and zinc and amoxicillin DT readily available.

Public-Private Partnership Initiatives Implemented in Niger

To achieve the expected results, a number of activities were carried out. First, through close partnership and advocacy, UNICEF was able to push for the inclusion of amoxicillin dispersible and ORS/Zinc in the list of essential medicines in Niger. Secondly, demand generation activities were designed and implemented through joint partnerships between UNICEF and the civil society (local NGOs, community leaders, health districts’ leads and local media) for social and behaviour change in order to enhance demand for appropriate healthcare services. Thirdly, the
development of strategic partnership with other NGOs- such as PSI- has extended the opportunities to enlarge scope for the gains achieved through the implementation of the program. There has been continuous monitoring of the community’s involvement in the proposed behaviour changes and twice a year, a national review is done in all districts as part of health development planning. This review covers key indicators including access to care and is done after joint partners’ field visits and participatory health system analysis. UNICEF actively participates in such forums and platforms alongside other partners. In addition to that, in 2012, UNICEF in partnership with the MOH launched the decentralized monitoring of implemented initiatives in 12 districts- including the four targeted under the program- aimed at identifying main bottlenecks of the health system and correction actions recommended for addressing the identified bottlenecks.

**Effectiveness of the Public-Private Partnerships Implemented**

It is notable that one of the key expected results from PPP was to have supportive changes towards the management of diarrhoea and pneumonia implemented in the country. Through effective advocacy and lobbying, UNICEF was able to have the essential medicines for these illnesses included in the list of essential drugs of the ONPPC. In addition to that, through partnership with UNFPA and the MOH, KFP communication on diarrhoea and pneumonia management was included ‘Husband Schools’ during demand generation activities. The role model husbands were deemed to be most effective in encouraging and influencing other men in their communities to take up recommended preventive and curative care seeking behaviours.

**Efficiency of the Public Private Partnership Initiatives**

The program implementation in Niger was within the framework of a joint action plan for resilience building in 35 vulnerable municipalities of Niger. Among the 11 municipalities targeted in 2014 for the implementation of the UN joint action plan for resilience building, 7 were in the 4 targeted intervention districts where the Diarrhoea and Pneumonia Treatment Initiative was implemented. Moreover, UNICEF Niger was also involved in the implementation of a nutrition project implemented in six communes of Madarounfa, Mayahi and Matameye with the support of the EU for acceleration towards the MDGs in Niger. This therefore meant that the targeted communities were able to benefit from joint efforts of different stakeholders. These synergies increased opportunities to improve the performance of the DFATD program.

**Sustainability of the Public Private Partnership Initiatives Implemented**

As indicated, UNICEF was implementing the program in Niger through joint efforts with other stakeholders, which would lead to interest and continuity. It was notable that there has been continuous monitoring of the community’s involvement in the proposed behaviour changes. Consequently, twice a year, a national review was reported as being done in all districts as part of health development planning. This review covers key indicators including access to care and is often done after joint partners’ field visits and participatory health system analysis. UNICEF actively participates in such forums and platforms alongside other partners. This presents an opportunity for continuity of the achievements made under the program and presents opportunities to further address existing bottlenecks towards the full realization of the intended impact. Further, in 2012, UNICEF in partnership with the MOH launched the decentralized
monitoring of implemented initiatives in 12 districts— including the four targeted under the Diarrhoea and Pneumonia Initiative. This monitoring was aimed at identifying main bottlenecks of the health system and correction actions recommended for addressing the identified bottlenecks. This notwithstanding, there is a need to create more synergies in the growth of PPP in Niger for more sustainability. Tremendous gains have been made through partnerships but these may not be sustainable if mechanisms to further relationships among key stakeholders in the health sector are not enhanced.

**Conclusion**

The objectives of the project were to first, increase public awareness and generate demand for appropriate diarrhoea and pneumonia care-seeking among providers and caregivers; secondly, to increase availability of essential medicines used in management of diarrhoea and pneumonia through strengthening procurement and supply chain management; thirdly, to strengthen public-private partnerships and make better use of private sector channels for appropriate diarrhoea and pneumonia treatment; and finally, to expand access to effective integrated treatment services for diarrhoea and pneumonia at community and front-line health facility level. UNICEF planned to use this project to further accelerate efforts to address two of the major child killers – diarrhoea and pneumonia – through building capacity of health systems and reaching out to non-traditional partners, including pharmaceutical manufacturers, distribution and logistics management enterprises and media experts, in order to provide more children with effective treatment. This external evaluation was thus relevant to document key achievements and to draw lessons for the future.

The project was able to make a number of achievements. For instance, it was able to increase the level of awareness for childhood diarrhoea and pneumonia as well as contribute towards the increase of the demand generated for appropriate diarrhoea and pneumonia treatments among providers and caregivers. Further, it was able to increase the number of children under five treated for diarrhoea and pneumonia and this could have been attributed to the improvements made in service delivery and to the improvements in the capacity of frontline workers to provide integrated case management. However, there were challenges with the quality of supervision of these frontline health workers. While structures and procedures had been laid down for their supervision, this did not happen in most countries and this needs to be managed in future programs. Additionally, there was an increase in public private partnerships for diarrhoea and pneumonia treatment, and these ranged from partnerships for demand creation, partnerships for improving service delivery to partnerships for improving supplies management. These partnerships were broad in their inclusion and brought together government players at both national level and local level, as well as other originations with programs similar to the implemented program. There were co-packaging initiatives that UNICEF laid the ground for and the approaches used differed from country to country. In some, the policy and regulatory framework was laid down to support these, in others, private sector players were engaged to support these bundling efforts, while still in others, the central drug stores that are in charge of procurement were engaged to support these co-packaging efforts. However, challenges were observed in the attempt to improve access to appropriate diarrhoea and pneumonia treatment through public and private sector channels. This was not because demand had not been created but by the fact that there were issues prevalent in the supply of essential medicines used in
treating diarrhoea and pneumonia. These issues were caused by a failure of the central agencies to anticipate the demand for products due to poor record keeping and information systems, as well as by poor procurement systems. The issue of poor procurement systems was easier to sort out because it needed to ensure that procedures and guidelines are in place of what should be included in the essential medicines list, and secondly, by setting out guidelines for drug registration and procurement. This was done in most of the countries. However, a problem abounds where it was not possible for governments to anticipate the needs for these essential medicines as the local government agents and health providers on the ground do not share information as quickly as it is required. Thus, by the time that requests are made and procurement issues are sorted, stock-outs are experienced. The supplies management component needs to be strengthened in most of these countries to ensure that forecasting is possible, as well as ensuring that the frontline health workers have consistent supply of products.

Recommendations
From the implementation of the program, the following lessons can be learnt, which can be used in the implementation of other similar programs in the future, as well as in scaling up this program in countries where it has already been implements. The lessons are divided between policy and strategic lessons, as well as program management and implementation lessons and can be accessed in the main report. However, below are some key highlights.

<table>
<thead>
<tr>
<th>Policy and Strategic Lessons</th>
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<tbody>
<tr>
<td>• The need to sort out policy and regulatory issues before engaging in project implementation</td>
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<td>• The need to build local capacity for production of essential medicines</td>
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<td>• The need to engage private sector players during implementation</td>
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<td>• Need to Engage Different Levels of Government in the Implementation Process</td>
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<table>
<thead>
<tr>
<th>Program Management and Implementation Lessons</th>
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<tr>
<td>• Ability to provide distance learning and training of frontline health workers.</td>
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<td>• Compensation of frontline health workers to enable them focus on health promotion activities</td>
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<td>• The need for mixed gender of frontline health workers</td>
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<tr>
<td>• The need for proper supervision and support of frontline health workers</td>
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<tr>
<td>• The need to conduct an assessment of essential medicines that exist based on previous interventions before launching a strategy to introduce new products</td>
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<tr>
<td>• Need to involve the communities during demand generation</td>
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4 Introduction and Background Information

UNICEF’s Diarrhoea and Pneumonia Treatment Initiative in four countries- Kenya, Tanzania, Niger and Ethiopia was a two-and-a-half-year project supported by DFATD-Canada (now Global Affairs Canada) from April 2013 to December 2015. The overall goal was to contribute to the reduction in child morbidity and mortality through increased coverage of effective treatment for diarrhoea and pneumonia. The ultimate purpose of this project was embedded in the renewed commitment to child survival through A Promise Renewed (APR) - to support scale-up efforts in the countries that account for the majority of under-five mortality. This was by bringing health services closer to underserved populations and addressing the main causes of child mortality. This would be achieved through building capacity of health systems and reaching out to non-traditional partners, including pharmaceutical manufacturers, distribution and logistics management enterprises and media experts, in order to provide more children with effective treatment; in close alignment and coordination with the roll-out of the UNCoLSC/RMNCH TF. The objectives of the project were to:

a) Increase public awareness and generate demand for appropriate diarrhea and pneumonia care-seeking among providers and caregivers;
b) Increase availability of essential medicines used in management of diarrhea and pneumonia through strengthening procurement and supply chain management;
c) Strengthen public-private partnerships and make better use of private sector channels for appropriate diarrhea and pneumonia treatment;
d) Expand access to effective integrated treatment services for diarrhea and pneumonia at community and front-line health facility level.

It is worth noting that UNICEF co-chairs the global CCM Task Force and needed to support integrated community case management (iCCM) in an increasing number of countries. Key barriers to scale-up identified through the CI/IHSS program (Catalytic Initiative) and UNCoLSC (the UN Commission on Life-Saving Commodities for Women and Children process for diarrhoea and pneumonia included limited access to community level treatment and low utilization of CHW services. Recognizing these bottlenecks, UNICEF expanded its focus to improve demand creation, procurement and supply management of essential, low-cost medicines and overall health system sustainability.
This DFATD project tied into several existing global initiatives that focussed on reducing the under-five mortality due to pneumonia and diarrhoea. The UN Commission on Life-Saving Commodities for Women and Children (UNCoLSC), now the RMNCH (Reproductive, Maternal, New born and Child Health), took on the challenge outlined in the UN Secretary-General's Global Strategy for Women’s and Children’s Health of saving lives through improving equitable access to life-saving commodities. Both diarrhoea and pneumonia commodities - ORS, zinc and amoxicillin dispersible tablets (DT) - were identified within the UNCoLSC’s list of 13 overlooked life-saving commodities, and highlighted in the Commission’s recommendations. Within this context of the UNCoLSC, UNICEF convened a global working group of key partners to accelerate treatment scale-up across 10 high-burden countries (including the four proposed for this project). The Pneumonia and Diarrhoea Treatment Working Group included several private and public sector partners, including Save the Children, PSI, KEMRI, and PATH; some of which were working with the UNICEF country offices to help implement this DFATD project on the ground. The Working Group supported governments and key stakeholders to develop national scale-up plans for essential medicines, specifying treatment coverage targets and outlining key public and private sector interventions to catalyse scale-up. These scale-up plans were based on a systematic analysis of existing interventions to understand bottlenecks in public sector, private sector, and at community level, and identify means to overcome these. The country analysis of barriers fed into the development of national strategy documents that outlined targeted interventions to significantly scale-up access to effective treatments for pneumonia and diarrhoea, particularly for the most underserved populations. UNICEF was also supporting governments to improve partner coordination and ensure a harmonized approach toward implementation of the national scale up plans for diarrhoea and pneumonia treatment. The national scale-up plans in these four countries helped identify the areas in which the DFATD country plans could make the most impact with sustainable project activities.

This project needed to enable UNICEF support implementation of some of the specific key activities identified in the country plans and to complement the efforts of other partners working at the country level. UNICEF was identified by the UNCoLSC as the ‘lead convener’ for the ORS, zinc and amoxicillin components of the Commission work, thereby leading the implementation of activities focused on these commodities for the Commission. In this way, the project was expected to be aligned with the rollout of country activities related to the ORS, zinc and
amoxicillin DT components of the UNCoLSC and in coordination with the implementation of the activities related to the broader set of recommendations made by the Commission.

This DFATD project was being addressed from several sides within UNICEF. The in-country work was being managed by the individual UNICEF Country Offices - Health Section and consisted of a team composed of about 5-10 people focusing on each specific project area (Demand Generation, Supply Management, PPP, M&E and Service Delivery). They managed the on-the-ground implementation, and the direct coordination among affiliated stakeholder partners, local NGOs and government agencies. The regional offices, ESARO (East and South Africa Regional Office) and WCARO (West and Central Africa Regional Office) were expected to harmonize among the various countries within their regions. UNICEF Supply Division (SD) in Copenhagen was expected to oversee all of the work related to procurement of the commodities and local supply chain management in all of the countries.

To evaluate the impact of this Initiative, UNICEF contracted Ipsos to conduct an End-of-Project Evaluation to document and assess the development results relating to the DFATD project. This was warranted for the reason that considerable resources were used to support the Initiative and therefore that its effects and experiences would be key sources of learning to a broader number of countries. The objective of the End of Project Evaluation was two-fold; it sought to:

- **Assess results**: determine the extent to which the Initiative achieved its expected results to contribute to a reduction in child morbidity and mortality through increased demand for and reliable supply of effective diarrhea and pneumonia treatment in the targeted countries

- **Enable evidence-based decision-making**: inform program stakeholders and in-country policy decision makers (including at the regional level) through provision of a written report with findings and recommendations.

The focus of the evaluation work was the four countries where the DFATD project was implemented; i.e. in Kenya, Tanzania, Ethiopia and Niger. Within each country, only the selected regions/ counties/ districts where the Diarrhoea and Pneumonia Treatment Initiative was implemented included as shown below.

<table>
<thead>
<tr>
<th>Target Country</th>
<th>Target areas</th>
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<tbody>
<tr>
<td>Kenya (counties)</td>
<td>Homabay</td>
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<td></td>
<td>Siaya</td>
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<td>Turkana</td>
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Nevertheless, the broader relevance, impact and sustainability of the Initiative were considered at the national and regional policy level.

## 5 Methods

A phased approach was adopted during the evaluation work as described below:

### 5.1 Phase 0

This phase was a preparatory phase held between Ipsos and the UNICEF to agree on the study approach and expected deliverables. The following activities took place:

#### 5.1.1 Inception Meeting

The purpose of the inception meeting was to agree on the final study approach to be applied for the study, to introduce the study teams and especially the contact persons for each country, as well as agree on the key points of contact for each country on either side of the study team. It was also at this stage that evaluation work timelines were agreed upon based on the progress made in implementing the project in the different countries.

#### 5.1.2 Collation of Desk Research Materials

Some of the key information areas of this study were to be addressed by reviewing project implementation materials to evaluate progress made in this program. A list of materials required was shared by the Ipsos study team to the UNICEF coordinating team for action. These materials
were collated for review. These materials were also necessary for informing the finalisation of the study protocol and the primary research instruments design process.

5.1.3 Finalisation of Study Protocol

At this stage, finalization of the study methodology, sampling approaches, as well as preparation of the data collection plan were done. It is also at this stage that the study protocol was prepared for ethical review and approval. The study protocol was used to guide the implementation process.

5.1.4 Instrument Design and Translation

Two main different respondent categories were anticipated for this study i.e. key informants/stakeholders and caregivers of children less than 5 years. Therefore, two different sets of instruments were designed to guide the data collection process with these caregivers. The instruments were designed initially in English and later translated to the local languages in each country. Instruments were translated into the following local languages as appropriate:

<table>
<thead>
<tr>
<th>Project Country</th>
<th>Target areas</th>
<th>Local Languages</th>
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<tr>
<td>Kenya (counties)</td>
<td>Homabay</td>
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<td>Siaya</td>
<td>Kiswahili</td>
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<td></td>
<td>Turkana</td>
<td>Turkana</td>
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<tr>
<td>Tanzania (districts)</td>
<td>Mbalan District Council</td>
<td>Kiswahili</td>
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<td></td>
<td>Mbeya District Council</td>
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<td>Iringa District Council</td>
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<td>Mulundi District Council</td>
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<td></td>
<td>Njombe District Council</td>
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<tr>
<td>Niger (districts)</td>
<td>Madarounfa</td>
<td>French</td>
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<td>Mayahi</td>
<td>Hausa</td>
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<td>Matameye</td>
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<td></td>
<td>Mirmah</td>
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<td>Ethiopia (regions)</td>
<td>Oromiya</td>
<td>Amharic</td>
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<td>SNPR</td>
<td>Oromigna</td>
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<td>Amhara</td>
<td>Tigrigna</td>
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5.1.5 Scripting of Study Material on Mobile Data Collection Platform

The face-to-face interviews with caregivers were done on CAPI (Computer Assisted Personalized Interviewing) platform for better efficiency and to manage the quality of data in an efficient manner. For this reason, the study instruments were scripted onto the CAPI platform used at Ipsos and translations loaded into the script. This was used for training of the data collectors as well as the data collection process.
5.1.6 Recruitment of Data Collectors

Based on the profile of the caregivers targeted, a team of data collectors were shortlisted from the Ipsos database of enumerators and contacted for engagement in this study. At a basic minimum, these enumerators had a college certificate and diploma and had been engaged before by the Ipsos team to conduct similar studies.

5.1.7 Preparation of training materials and training of teams

Training manuals to guide the training of data collectors were prepared at this stage. Training of the recruited data collection teams was guided by this guide and covered the following subjects:

a) Introduction and purpose of the study
b) Study approach
c) Ethics in research
d) Review of the project materials and instruments
e) Practice sessions in pairs and groups for the data collection team
f) Pilot study in an area similar to the targeted study areas. This culminated in a debriefing session where review of the training process was assessed as well as a re-run of problematic areas identified during the pilot exercise.

The above approach was used in all the four project countries.

5.2 Phase 1

This phase of the study comprised of a review of desk research materials to inform the study findings. Some of the key sources of secondary information included project’s baseline report and other monitoring reports been done earlier, national procurement policies on diarrhoea and pneumonia management, procurement data of essential medicines, workshop reports and minutes from diarrhoea and pneumonia coordination groups, reports on awareness campaigns conducted by UNICEF and other partners on childhood pneumonia and diarrhoea, training reports for frontline health workers, frontline health workers supervision reports among others. Findings from this phase were triangulated with the primary research findings to provide a comprehensive outlook of the Initiative’s achievements.
5.3 Phase 2

This phase comprised of collecting data from primary research sources through the use of qualitative and quantitative research methods. Qualitative key informant interviews were carried out with project stakeholders, relevant national government officials, diarrhoea and pneumonia coordination group leads as well as county/region/district in charge of health officials in the project areas. These were as summarized below:

<table>
<thead>
<tr>
<th>Qualitative Interviews Summary</th>
<th>Kenya</th>
<th>Tanzania</th>
<th>Ethiopia</th>
<th>Niger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government official- in charge health at national level</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Diarrhea and Pneumonia coordination group officials</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>District/county/region in charge of health</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Private Partners</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Frontline Health Workers</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Supervisors of the Frontline Health Workers on the ground</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Supply chain managers from national medical stores as well as from UNICEF offices.</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>C4D Managers</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Total Key Informant Interviews</td>
<td>23</td>
<td>23</td>
<td>24</td>
<td>24</td>
</tr>
</tbody>
</table>

The following applied during qualitative research data collection:

- **Profile of the Moderators**: Noting that the profile of respondents targeted in qualitative research were of high profile and were experts in various fields in the health sector, the profile of moderators (data collectors) engaged was of high profile. They had at least a university degree and had experience conducting health related research.

- **Informed Consent**: Consent was obtained from the respondents interviewed. This followed the laying out the background of the study as well as the rights of the respondents in survey research to them to allow them to make an informed consent. The content was also read out by the fieldworkers and a copy left with the respondents for record keeping.

- **Compensation, Risk and Benefits to the Respondents**: The nature of the study did not pose any risks to this profile of respondents as they shared their insights on the program implementation process. However, noting that this profile of respondents was made up of busy personalities who were difficult to find, incentives provision was considered where necessary. The incentive was minimal and was not in cash. This notwithstanding, the incentive only acted as a token of gratitude and compensation for time spent in participation. Care was taken to ensure that such an incentive did not affect
the quality of responses obtained. Interviews were conducted in a private area comfortable to the respondent.

Quantitative research methods on the other hand were applied and targeted caregivers of children under the age of 5 years in the project implementation areas. Face to face interviews were administered using a semi-structured instrument. A random sampling approach (proportionate to the population) was used at the first level to determine the sample to be targeted in each district/region. At the second level, the sample was distributed according to the proportion of children under the age of 5 years in each region. Thereafter, we targeted one caregiver of such a child per household. The sample targeted in each area was as summarized below:

<table>
<thead>
<tr>
<th>Project Country</th>
<th>Where</th>
<th>Sample</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenya</td>
<td>Homabay</td>
<td>147</td>
<td>384</td>
</tr>
<tr>
<td></td>
<td>Siaya</td>
<td>122</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Turkana</td>
<td>115</td>
<td></td>
</tr>
<tr>
<td>Niger</td>
<td>Madarounfa</td>
<td>70</td>
<td>384</td>
</tr>
<tr>
<td></td>
<td>Mayahi</td>
<td>98</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mataméye</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Miniah</td>
<td>159</td>
<td></td>
</tr>
<tr>
<td>Ethiopia</td>
<td>Oromiya</td>
<td>160</td>
<td>385</td>
</tr>
<tr>
<td></td>
<td>SNNPR</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Amhara</td>
<td>105</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tigray</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Tanzania</td>
<td>Mbali District Council</td>
<td>59</td>
<td>384</td>
</tr>
<tr>
<td></td>
<td>Mbeya District Council</td>
<td>145</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Iringa District Council</td>
<td>84</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mufindi District Council</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Njombe District Council</td>
<td>44</td>
<td></td>
</tr>
</tbody>
</table>

The following applied during quantitative research data collection:

- **Profile of the Field Team**: data collection teams engaged were able to speak the local languages required for this study. In addition, the engaged teams had a minimum of a diploma from a two-year college course and had substantive experience in collecting data for other similar studies. They were mature individuals who were aged at least 25 years.

- **Informed Consent**: Consent was obtained from respondents after laying out the background of the study and the rights of the respondents in survey research work. This allowed them to make an informed consent. Most of the respondents in this category were literate and were therefore able to read and comprehend the content of the consent form provided. Additionally, the content of the consent form was translated into local language
for ease of comprehension and provision of informed consent. The content was also read out by the fieldworkers and a copy left with the respondents for record keeping.

- **Compensation, Risk and Benefits to the Respondents:** the nature of the study did not pose any risks to this profile of respondents as they shared their insights on awareness and usage of diarrhoea and pneumonia treatments for their children under 5 years. No incentives were provided to this category of respondents. Interviews were conducted in private, in an area comfortable to the respondent – in most cases, at their homesteads, taking care to observe cultural sensitivities and nuances in each area.

### 5.4 Phase 3

This phase of the study comprised of data handling, analysis and reporting. The following applied in this phase:

- **Data Handling:** Ipsos was responsible for maintaining data integrity and monitoring the safety of the human subjects in this study. For the key informant interviews, the interaction was audio recorded and later transcribed for analysis. Consent was requested to audio record the conversation with the respondent. In cases where the respondent declined to be audio recorded, the interviewers wrote notes detailing the interview. These notes or transcripts were coded and later analyzed for reporting. For the household interviews with caregivers, a different strategy was adopted. Upon completion of each interview, data on the CAPI platform was immediately uploaded to the Ipsos cloud servers for storage. No copy of the data was left on the mobile device used for data collection. On the Ipsos server, only the essential project team at Ipsos had access to the data. When sharing the data with the rest of the study team, care was taken to remove identifying information of the respondents to maintain their privacy. Data was shared using password protected files to the study team. For each day of data collection, a person responsible for ensuring data quality checked the data received on the server and gave feedback to the field team for action. This ensured that at the end, the quality of the data collected was good.

- **Data Analysis:** The analysis phase mainly comprised of analyzing collected data and preparing the study report for submission. The qualitative data from the notes and transcripts were coded using qualitative analysis software – specifically Nvivo and the coded information used for reporting. Codes were developed to fill into the research
questions for this study to ensure that the final report met the objectives of this study. The quantitative data on the other hand, from the interviews with the caregivers was already been entered on a CAPI platform. This data was extracted in ASCI code and converted into SPSS. Open ended responses were translated and coded to enable data minimization. A detailed data processing instruction was developed and used for analysis. Data was provided in SPSS and in addition to that, excel tables were provided in conformity with the data processing instructions

- **Reporting** - Data from the different sources was triangulated and results presented on a country by country basis. The data was presented based on the total scores rather that at individual respondent level for confidentiality purposes

- **Data Storage** - Data collected in this study will be stored on the Ipsos server for a period of three years (from the final reporting date) after which the files will be destroyed.

### 5.5 Key Challenges Faced during the Study Implementation

A number of challenges were faced during the study’s implementation processes. These included the following:

- **Desk research materials** - at the onset of the study implementation, a list of desk research materials needed for review were requested for from the various UNICEF project implementation teams. There was however a delay in the collation and provision of these materials. This challenge was overcome through liaison with the lead coordination teams who assisted in following up with the individual teams responsible. In addition, appointments and physical visits were made to the offices where materials were still missing for review of these at the local offices.

- **Ethical clearance** - for implementation of any research work in each country of interest, Ipsos and its partners liaised with the relevant authorities for the acquisition of required research permits to allow for the smooth implementation of research studies. Where the nature of the research study is deemed intrusive, further ethical clearance is sought on a project by project basis. For the implementation of the primary research methods in the evaluation work carried out in this study, the acquired in-country research permits sufficed since the nature of the data collection was not deemed intrusive to warrant for the seeking
of further ethical clearance. In Tanzania however, it was found that though Ipsos had the required permit to carry out research work in the country, and though the nature of the data collection being carried out was not intrusive to warrant for the seeking of ethical clearance certification, this was still required. Ipsos therefore pursued the acquisition of this certification from NIMR (National Institute for Medical Research), a process which delayed the primary research phase of data collection in the country for a period of 3 months.

- **Difficulty in reaching high level profiles** - the qualitative research component of this study took particularly long due to the busy schedules of the profile of respondents. Some respondents would for instance re-schedule appointments made due to other engagements. This challenge was overcome through consistent follow ups and extension of the data collection period to allow the targeted samples to be achieved. In addition, where the targeted respondent was not available, the data collection team requested him/her for the recommendation of another equally qualified respondent to provide the sought after information from the target organization/ institution. Where this was not feasible, this was recorded as a refusal. Minimal cases of refusals were however recorded/ encountered.

- **Disconnect during project implementation** - it was found that there seemed to be a disconnect in the cascading of information during the project implementation processes in some of the project countries. In Niger for instance, targeted respondents for the ‘private partner’ and ‘lower cadre’ interviews (qualitative research component) were difficult to achieve as respondents complained that they had not been adequately involved in the project implementation processes and did not therefore feel adequate to respond to the study questions. Following persuasions however, a number of them agreed to participate. Subsequently, it was observed that indeed, these could not provide insights for a number of the information areas sought.
In this chapter, the evaluation findings are presented in detail. The evaluation report is structured according to the OECD/DAC criteria of relevance, effectiveness, efficiency, sustainability and impact as they are listed in the ToR. The evaluation questions and the corresponding results also need to be attributed to the OECD/DAC criteria. Results referring to the crosscutting issues (poverty, gender, and environment) also need to be considered under the OECD/DAC criteria or the evaluation questions, but additionally need to be described separately. Statements and conclusions must be comprehensible and be supported by data. Wherever it seems relevant, data must be presented and interpreted in a sex-disaggregated manner. Hypotheses must be verified and falsified.

In this section, we present findings of the external evaluation for Kenya, Niger, Ethiopia and Tanzania in different sections of this chapter but structuring the findings for each country around the OECD criteria of relevance, efficiency, effectiveness and sustainability.

### 6.1 Focus on Kenya

In 2013, UNICEF successfully mobilized USD 4,591,616 from DFTAD to support scale-up implementation of IMCI in primary health facilities and iCCM in underserved areas and to generate local evidence that would inform policy on treatment of childhood pneumonia by Community Health Volunteers (CHVs) in Kenya. The support from DFATD specifically aimed at increasing coverage of pneumonia and diarrhoea treatment by at least 10 percentage points in three counties; Siaya, Homabay and Turkana, through implementation of national and county level activities by the end of 2015. The health systems approach to addressing the unmet need for treatment needed to contribute towards strengthening the delivery of other child health interventions. With this in mind, it is important to understand the background against which the program in Kenya was being implemented.

Kenya is a country with a projected population of 43 million people, of which, 17% are below the age of five. It is a country with a devolved system of government since 2013 that needed to bring governance closer to the people, result in efficiencies in service delivery, increase the level of accountability, and address inequities seen in the country in the period preceding this form of governance. Various issues are devolved to the county government but it is worth noting that
the national governments and the county governments are distinct from each other in terms of their operations.

The health provision component is devolved to the county governments. In this kind of arrangements, the county governments receive funds from national budget based on agreed allocation criteria and this money is used to implement county development plans. However, it is not guaranteed that once funds are received from the national government that they will be used immediately as these counties have to come up with budgets that are debated by county assemblies before approval. This is a major change from the way the health sector was managed in the past and this has posed challenges in the project implementation process. In as much as this form of government has created immense opportunities, it has resulted in a myriad of challenges such as that of co-ordination of nationally important initiatives, creating a system of accountability for results, clarifying role and reducing duplication in roles between the national government and the county governments as well as in building capacity of personnel in the county governments.

In Kenya, the program was implemented in three regions: Siaya, Homabay and Turkana. Siaya and Homabay Counties are agrarian zones while Turkana is an ASAL zone. Information from the UNICEF country team in Kenya indicated that the reasons that these regions were selected were that Siaya and Homabay counties represent the agrarian zones in Kenya with high morbidity and mortality rates from diarrhoea and pneumonia as well as having disparities in terms of access to healthcare services. On the other hand, the reason given for selecting Turkana county (the third regions where the program was implemented) was that it was a region that represented the arid and semi-arid regions (ASAL) and which had high morbidity and mortality rates, high poverty rates, as well as being a region that had faced many years of underdevelopment, and had limited access to health-care services.

According to the 2005/6 KHIBS, the percentage of children (0 - 59 Months) who suffered from Diarrhoea County estimates shows that the following counties have the highest disease burden from diarrhoea.

<table>
<thead>
<tr>
<th>Rank</th>
<th>County</th>
<th>Percent that suffered from diarrhoea</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Isiolo</td>
<td>29.10%</td>
</tr>
<tr>
<td>2</td>
<td>Kisumu</td>
<td>23.50%</td>
</tr>
<tr>
<td>3</td>
<td>Homa Bay</td>
<td>20.70%</td>
</tr>
<tr>
<td>4</td>
<td>Vihiga</td>
<td>20.10%</td>
</tr>
</tbody>
</table>
From this, it is evident that Homabay and Siaya rank among the top 10 counties that face high disease burden from diarrhoea; though based on this, it is not clear how Turkana was selected to represent the ASAL regions as Isiolo county ranks higher in terms of disease burden from diarrhoea. Using MICS5 data for Turkana county shows that 17.4% of children in the county were reported to have had diarrhoea in the preceding two weeks to the MICS data collection exercise for 2013/14, while 5.1% of these children were reported to have suffered from acute respiratory infection (ARI) at the same period. In Bungoma county on the other hand, 11.9% of the children were reported to have suffered from diarrhoea in the last two weeks preceding the MICS5 data collection exercise in the same year, while 3.8% had ARI at the same time. We note that MICS5 data is not available for Siaya county, but observed that 2011 MICS4 data for Kenya (Nyanza Province), where both Siaya and Homabay counties fall shows that Siaya has the highest prevalence of diarrhoea diseases in the province (as shown in the table below); though there is no comparable data for the entire country against which diarrhoea disease prevalence can be analysed.

<table>
<thead>
<tr>
<th>County</th>
<th>Had diarrhoea in last two weeks</th>
<th>Number of children age 0-59 months</th>
<th>Number of children age 0-59 months with diarrhoea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Siaya</td>
<td>19.5</td>
<td>809</td>
<td>158</td>
</tr>
<tr>
<td>Kisumu</td>
<td>18.2</td>
<td>861</td>
<td>156</td>
</tr>
<tr>
<td>Homabay</td>
<td>15.6</td>
<td>868</td>
<td>136</td>
</tr>
<tr>
<td>Migori</td>
<td>12.9</td>
<td>930</td>
<td>120</td>
</tr>
<tr>
<td>Kisii</td>
<td>14.6</td>
<td>1135</td>
<td>165</td>
</tr>
<tr>
<td>Nyamira</td>
<td>13.2</td>
<td>442</td>
<td>58</td>
</tr>
</tbody>
</table>

A similar trend however was observed in the region for under five mortality using the same dataset as shown below.
All the same, these three counties were estimated to have 706,000 children under the age of 5 years and these were the focus of this program.

### 6.1.1 Current Programming in Kenya

As noted in the introduction, the country is facing a devolved system of government and at the project implementation processes, it was important to find partners implementing programs in the same areas, with the same target population and which had already formed enough connections with the local county governments. It is with this in mind that the UNICEF Country team in Kenya worked with KEMRI and Save the Children. KEMRI was the implementing partner in Siaya and Homabay while Save the Children was the implementing partner in Turkana.

The program in Kenya focused on the following:

- a) Demand Generation
- b) Improving Service Delivery
- c) Supply Management
- d) Public-Private Partnerships

Each of these items will be evaluated and presented in this report based on OECD guidelines of relevance, effectiveness, efficiency and sustainability.

### 6.1.2 Demand Generation – Communication for Development

Demand generation was targeted at the caregivers of children under 5 years as well as their families.
The Need for the Demand Generation Activities

The demand generation component was an important component for this program based on the assumption that increases in the levels of knowledge, positive improvements in the attitudes and opinion would create demand for services; which ultimately, would lead to a reduction in morbidity and mortality.

Demand generation was necessary to create an environment that encourages individuals, families, and communities to act positively for their health and to access and advocate for quality health services. Under this program, demand generation activities were geared towards increasing public awareness and generate demand for appropriate diarrhoea and pneumonia care seeking among providers and caregivers and secondly, through expanding access to effective integrated treatment services for diarrhoea and pneumonia at community and front-line health facility level.

Among the general public living in the counties under this program, there is a perception that diarrhoea and pneumonia are not major conditions to necessitate medical attention; yet, these diseases are well documented as some of the leading causes of morbidity and mortality. However, in these communities, the gravity of these diseases is not well understood. This is well elaborated in the excerpt below;

“…The usual perception about what a serious condition is a challenge… majority don’t consider a cough or diarrhoea to be very serious. diarrhoea is considered as a normal thing that a child goes through…For diarrhoea, caregivers consider effective management at home and use all sort of things expect what is recommended…Late care seeking before making decision to step out of their home. CHAI Representative, IDI

Further, there is a challenge in the care seeking behaviour among the target population. The trend is to first make use of local and traditional solutions before seeking medical opinion from qualified and trained professionals.

“Some of the barriers are cultural; some of the barriers are just around care seeking behaviour. People are used to first line of their treatment being self-medication, and it’s only when you see that things are not improving that you take that…There is a lot of issues around witchcraft like bad eye, which means they might or might not seek health care because they believe some things are caused by witchcraft hence go to witchdoctors. In Turkana and Homabay, we followed up with knowledge attitude and practices study around maternal, neonatal and child health. That opened our mind: for instance, in Homabay if you come out of the house, you meet a black cat, you are going to the hospital, that is a bad omen, and you had better go back. If you come out of the house and you hit your foot on the stone, that’s a bad omen.”Chief - Communication for Development in the UNICEF Kenya office
Another issue that needed to be addressed with such caregivers is the traditional subdivision of roles and responsibilities around the homestead. There is a perception that the role of taking care of children is a female responsibility; where at the first level, it is the responsibility of the mother, and in the absence of the mother, it is the responsibility of the female relatives, and especially the grandmother. This trend is obvious based on data collecting during the external evaluation, where most caregivers were female. While mothers are easier to target and influence through communication, it appeared that there was a challenge doing the same for the other female caregivers, and especially grandmothers.

“In the Turkana setting, it is rare to get a male caregiver…the society defines women as the caregivers, the program has aimed at bringing in men into the decision making of a child’s health. The involvement of men has a big impact. The program had men barazas [community meetings] which try to bring men on board in decision making in regards to child’s health generally, when a mother is sick for antenatal care, when a mother is due for delivery and she is supposed to undergo skilled delivery.” Save the Children Representative, Turkana, IDI

“…mothers…they are the ones who are in close contact with those children, getting a father is not always easy; maybe if the mother is not there and the mother is sick, its where you can get a father stepping in to assist… with mothers, they will tell you a lot of things concerning their health and the household but with fathers, they will just direct you to go and talk to the mother, they think of time.” CHA Rarieda, IDI

Grandmothers were mentioned as having a tendency to feel that they have raised many children before, are more experienced and therefore are not commonly open to new information.

“For the mothers we have not had issues but for the grandmothers is where issues to do with changing the behaviour becomes a challenge…mothers are really keen to take this information [We give] but then grandmothers at some point they are slow and resistant…” UNICEF Community Strategy Focal Person, Siaya, IDI

Further, there is a financial angle to the challenges that these female caregivers face. While the female caregivers and mostly responsible for their children and especially on their health, they are not financially empowered and have to seek support and final decisions of the male heads of household. From the household data, while most caregivers are female, the main decision about how money is spent in the household is done by their spouse – the male head of the household. This is true for 54% of the households where this was mentioned, and more so in Homabay and Siaya counties. However, a difference was observed in terms of the decision-making trends in Turkana where the caregivers mentioned that they were the main decision makers.
These male heads of household who are the key decision makers in most instances were noted as being distant from the needs of their children and thus do not follow the treatment recommendations of the health workers – especially where it has a financial implication. This is elaborated by the excerpts below.

“…you can sit and talk with the mother and agree to a certain level…but when the man comes in, he says, you won’t do that, I don’t have money and maybe the mother was waiting for him to give her money to go to the facility…I don’t have money, I will not do that… and when you go back the mother tells you the man said he doesn’t money and she doesn’t know what to do… but with me I am a volunteer so no payment…we get it tough, seeing a child suffering but you have to use all that you have to ensure the child gets good care.” Homabay female CHV, IDI

“…for mothers and grandparents the challenge is financial …maybe they have been given advice on some solutions for the child but because of financial constraints they are not able to follow through… a good example is transport. You are given a referral to go to facility X because maybe the child has presented a danger sign that cannot be handled in the community as a volunteer. The person will not go to the health facility and thereby delaying.” UNICEF Community Strategy Focal Person, Siaya, IDI

One would assume that it would be easy to take a joint approach in targeting both the male and the female caregivers in increasing their levels of awareness so as to create demand for services but this is not the case. Handling communication with the male caregivers needs to be handled with the sensitivity it deserves because of societal expectations and norms. It emerged that men feel stigmatised taking care of children and therefore the subject of childcare may be difficult to pursue. However, this is an angle that is being pursued by other program implementers.

“Can’t think of anything except that a man can feel stigmatized taking care of children…There are programs that have tried to reach out on male involvement in taking care of their wives, children and themselves; that is to make the male involved in the care of the child from birth. When mothers come in to the clinic they are advised to come in with their partners.” CHAI Representative, IDI
This stigmatisation has been made worse by the fact that most health facilities are women centred; especially in the units dealing with childcare and treatment.

“…male caregivers do not feel comfortable to go and line up with women. The problem we have in some instances is that our service points are not really designed in a gender sensitive way. So if you are the only man, and you have to go line up with these women, how does that make you feel? Then if you have to sit in this bench in the middle of women, how does that make you feel? It’s really about what is not really factored into the service points that then makes people think whether they perceive themselves as fitting into the context…In Africa, the care giving role is that of the woman, so if you see a man typically in some setting that is bringing the child to the hospital, I am not talking about the modern/city setting, you are likely to think, “Poor man, the wife died.” Maybe it is not that the wife died, maybe it is just a father who took interest in the care of the child. That is changing with modernization, with people realizing more of the need to role-playing. Chief - Communication for Development in the UNICEF Kenya office

These are some of the contextual challenges and situations that the programme was operating under. The activities that the program team implemented in these counties to generate demand are explained in the next subsection.

**Demand Generation Activities Implemented Under the Program**

Preceding the demand generation activities under this program, a Maternal Neonatal Child Health-Knowledge Attitudes and Practices (MNCH-KAP) study was conducted in 2014 in Homabay and Turkana to identify social norms and other individual behavioural and collective practices that negatively affect demand for and utilization of preventive and treatment measures against common childhood diseases and immunization. The findings from this study were used to develop iCCM CHV job aids and a household booklet that were used for the implementation process. The C4D team at UNICEF led a message harmonization meeting among all partners. This is as elaborated below.

“We had two sets of materials…We had a job aid for CHVs which had several other topics, but we make sure it also included those topics such as malaria, pneumonia and the rest of it…We have also what we call the household booklet which were developed for Siaya and Homabay respectively. The content was the same but to promote ownership, we prepared for each county and inserted its [the county's] own logo…we made sure that both booklets in all counties had the same message…that they are speaking the same thing…in the family ICCM booklet, we had key messages on hygiene, including on pneumonia and diarrhoea…including diarrhoea prevention and hand washing. Then we had one on pneumonia which was talking about making sure that you don’t cook in the house, that you have a specific place for cooking, and if the child is small it showed the type of clothing that was required to keep the baby warm…it had information that showed one what to do if a child has a fever…that you need to quickly go to the hospital where you continue to feed the child. The booklet remained in the household… Many households have children that can read but we made it also pictorial, that even without the text, the pictures are more or less able to speak for themselves. We used this combination because we believed that many Kenyan homes due to the free primary education, there are children who can read, which makes it easy to keep it at the household level, and it becomes a reference point. There was also a page after each topic for the family to
write their own notes...it had an element of monitoring. We wanted to know whom the CHVs were talking to, and how many times, so that if they had discussed this topic for the first time, they would cross it once jointly with the household. With the CHVs, we wanted to know whether its only mothers who have the privilege of accessing this information or whether we were getting the whole family spoken to. So if it is just the mother, they [the CHV] would mark the mother, and if it was the whole family, each of them would mark. That becomes a monitoring element at the household level." Chief - Communication for Development in the UNICEF Kenya office.

“...and we were doing different things about it. Due to high level of illiteracy in Turkana, the awareness messaging is material friendly to illiterate and has more of pictorial. CHVs are providing information and counselling to household targeting caregivers and all other members, this is to ensure for instance main decision makers understand the importance of the caregivers seeking treatment immediately the child gets sick. The CHVs are also involved in educating the community on how to prevent diarrhoea: hygiene and good nutrition. Their presence also helps bring the treatment near/accessible to the caregivers who have stock of the treatment commodities. Further, creation of the co-pack to ensure administration of both zinc and ORS helps. Finally, it is important to educate everyone on treatment of diarrhoea including the non-caregivers to ensure effective awareness but most important, we need to create a supply for the treatment of diarrhoea through community health workers/volunteers.” Programme Officer, Ministry of Health - Division of Family Health

To prepare such communication materials, it was apparent that the UNICEF team and the implementing partners came up with a communication strategy, that involved the subdivision of roles and responsibilities which included preparation of behaviour change communication materials sought to result in improvements in the levels of awareness and ultimately, in improvements in the level of demand for services. During the preparation of the communication content, it was necessary to take into consideration the fact that female caregivers are more common than the male caregivers; and a women centric approach was necessary, of course considering the male heads of households due to the financial support component.

“It’s also an issue because you will get that this mother is the one taking care of the children and in rainy seasons, you’ll just hear that this woman is the one who went to the farm and the man is not even helping her and he’ll just tell you that I don’t have time to take this to the store because I’m the one doing this and this but if I’ll get time or if I’ll just finish this farm of mine, it’s when I’ll go to the hospital... I think it’s different because mothers are the ones who take those children to I don’t know where; to those witchdoctors, I don’t know; the child has been taken to be prayed for, if there’s no change; that’s when you’ll get that they’ll come to the facility, yes but for fathers that I’ve interacted with, I’ve not experienced that; most of them just bring the case but they are few forefathers who normally bring the case to the hospital.” CHA Rarieda, IDI

The implementation process of this communication strategy was however different, due to the differences in the existing structures of governance, health provision and community context situations. For instance, in Siaya and Homa Bay Counties, a campaign called “Wadagi,” which means “we refuse” in the local language, was launched. Wadagi was a leadership challenge that rallied the communities to refuse to accept preventable deaths in children and mothers and
was a campaign that was highly publicized in local media. In addition to the Wadagi initiative, the program also used CHWs to carry out routine social mobilization activities in the different local communities.

“So the Wadagi thing was first launched in Homa Bay then told out to Siaya as well so it was a good initiative.” National Project Coordinator for iCCM, IDI

The wadagi initiative was run as part of iCCM. The frontline health workers were trained to provide information to the caregivers as well as provide the first level of treatment for diarrhoea at community level. For pneumonia, the approach was different due to the challenges posed by the healthcare and treatment guidelines in the country that prevent frontline health workers from prescribing Amoxil DT. The reason for this is that Amoxil DT is classified as an antibiotic, which can only be prescribed in health facilities by a qualified health professional. In Turkana county on the other hand, the iCCM approach was adopted to generate demand.

Under the iCCM approach, various things were done to guide its implementation. First, there was need to identify them frontline health workers, train them, provide them with materials for use and release them to conduct the information sharing with close supervision. In addition to that, it was necessary for the frontline health workers to attend monthly meetings with their supervisors to help them refine their skills and messages so as to have better impact in their local communities that they were responsible for. Details of how these activities were carried out are well elaborated under the Service Delivery component explained in the next subsection, though in this section, we will assess the progress they made to help generate demand.

The Effectiveness of the Demand Generation Activities

From the data generated by both the program as well as the external evaluation, it appears that there are a couple of improvements observed.

e. Improvements in the Levels of Awareness on these Diseases

We began by exploring about what the sources of information about pneumonia and diarrhoea for the caregivers were and it was apparent that most information is obtained during an interaction with a doctor, nurse or clinical officer in the course of treatment. About 38% of the caregivers mentioned the frontline health workers as a source of this information and it was observed that a similar number (36%) mentioned that a frontline health worker has ever come
to their household to inform them about pneumonia and diarrhoea disease management in their children less than 5 years.

Overall, it does seem that the levels of awareness on the two main contributors to child morbidity and child mortality were mentioned as having improved.

Awareness is part of the things that we are addressing in the intervention. What we were doing is capacity building on the resource persons, those are the community health volunteers, equipping them with knowledge, they live within the community so what they were doing is access these mothers and give them health education, teach them the danger signs of diarrhoea and pneumonia and also they should be alerted if they see any of those signs. So that is the health education, creating awareness, and also addressing the knowledge gap in terms of the common illnesses in the community so that was part of the intervention.

National Project Coordinator for iCCM, IDI

*The awareness levels have increased for both products ORS (96% now from 72% in 2009) and zinc (17% now from 0% in 2008). About 93% of women are aware on ORS, and 17% are aware of zinc. Zinc is an addition to the policy we had. ORS has been there for more than 3 decades hence is known to caregivers, zinc was adapted as part of the treatment in 2007.* CHAI Representative, IDI

The evaluation explored to confirm this with the caregivers and the caregivers were asked to mention the things that they would look out for to judge whether the diarrhoea their child was suffering from was mild or more serious enough for them to seek immediate medical attention. From our findings, we observe that most of the caregivers are able to identify various signs and symptoms – with the most commonly mentioned one being how watery their child’s stool is.
### Things you look for to judge whether the diarrhea your child is suffering is mild or more serious enough for you to seek immediate medical attention.

<table>
<thead>
<tr>
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<th>County</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total(392)</td>
<td>Homa Bay(135)</td>
<td>Siaya(131)</td>
</tr>
<tr>
<td>How watery the stool is</td>
<td>42%</td>
<td>33%</td>
<td>32%</td>
<td>62%</td>
</tr>
<tr>
<td>The child’s energy level</td>
<td>19%</td>
<td>29%</td>
<td>26%</td>
<td>1%</td>
</tr>
<tr>
<td>Whether vomiting or has fever</td>
<td>7%</td>
<td>2%</td>
<td>5%</td>
<td>13%</td>
</tr>
<tr>
<td>The frequency of bowel movements</td>
<td>6%</td>
<td>6%</td>
<td>11%</td>
<td>2%</td>
</tr>
<tr>
<td>Whether the child’s eyes are sunken and hollow</td>
<td>6%</td>
<td>4%</td>
<td>9%</td>
<td>5%</td>
</tr>
<tr>
<td>The color of the stools</td>
<td>5%</td>
<td>4%</td>
<td>4%</td>
<td>7%</td>
</tr>
<tr>
<td>Whether blood in the stool</td>
<td>4%</td>
<td>2%</td>
<td>8%</td>
<td>-</td>
</tr>
<tr>
<td>The smell of the stools</td>
<td>2%</td>
<td>5%</td>
<td>1%</td>
<td>-</td>
</tr>
<tr>
<td>Whether child is eating/drinking normally</td>
<td>1%</td>
<td>1%</td>
<td>-</td>
<td>2%</td>
</tr>
<tr>
<td>Whether the child has pains</td>
<td>1%</td>
<td>2%</td>
<td>1%</td>
<td>-</td>
</tr>
<tr>
<td>Whether the child’s skin shrinks or is wrinkled</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>-</td>
</tr>
<tr>
<td>Other symptoms</td>
<td>6%</td>
<td>9%</td>
<td>2%</td>
<td>8%</td>
</tr>
</tbody>
</table>

However, the level of awareness of other serious symptoms was low. Examples of symptoms that received low mention included bloody stool, wrinkled or shrivelled skin as well as loss of appetite.

With regard to the levels of awareness to pneumonia symptom identification and treatment recommendations, it was observed that, fewer caregivers are able to identify the critical symptoms for which they would be required to seek immediate medical attention. From the data in the table below, it is apparent that only a third of the caregivers mentioned difficult or fast breathing. Further, only 20% of the caregivers were able to mention chest in-drawing.

### What symptoms of Pneumonia would make you seek immediate medical attention for your child under the age of 5 years?

<table>
<thead>
<tr>
<th></th>
<th>.</th>
<th>County</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total(392)</td>
<td>Homa Bay(135)</td>
<td>Siaya(131)</td>
</tr>
<tr>
<td>The child had fast or difficulty breathing</td>
<td>33%</td>
<td>34%</td>
<td>20%</td>
<td>45%</td>
</tr>
<tr>
<td>The child had a high fever</td>
<td>28%</td>
<td>28%</td>
<td>40%</td>
<td>15%</td>
</tr>
<tr>
<td>The child was drawing their chest</td>
<td>20%</td>
<td>21%</td>
<td>2%</td>
<td>38%</td>
</tr>
<tr>
<td>The child was sweating or had chills</td>
<td>13%</td>
<td>12%</td>
<td>24%</td>
<td>2%</td>
</tr>
<tr>
<td>The child had a cough that produced yellowish or green mucus</td>
<td>9%</td>
<td>15%</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>The child had chest pains</td>
<td>8%</td>
<td>10%</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>The child was weak and docile</td>
<td>8%</td>
<td>16%</td>
<td>4%</td>
<td>5%</td>
</tr>
<tr>
<td>The child was vomiting</td>
<td>4%</td>
<td>2%</td>
<td>8%</td>
<td>1%</td>
</tr>
<tr>
<td>Others signs and symptoms</td>
<td>16%</td>
<td>18%</td>
<td>17%</td>
<td>15%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>20%</td>
<td>28%</td>
<td>23%</td>
<td>10%</td>
</tr>
</tbody>
</table>

While it is worth noting that 20% of the caregivers are not able to mention any sign or symptom, and most especially in Homa Bay and Siaya counties, it is evident that Turkana county performed better than the other counties based on the proportion of caregivers that could clearly identify the critical signs and symptoms for pneumonia for which they are required to seek immediate medical attention.
f. Improvements in Care Seeking Behaviour

Based on the evaluation, it was said that there were improvements observed by the various program implementer that the program helped improve care seeking behaviour among the caregivers.

“Yes, from the evaluation, care seeking from pneumonia and diarrhoea actually improved. Therefore, that means that the care givers understand more that when a child is sick they have to see a health worker. Then when we also did the A line evaluation, the knowledge of the care givers, on pneumonia and diarrhoea danger signs also improved from there, that actually shows that the intervention actually made an impact.” National Project Coordinator for iCCM, IDI

“… the mothers are so cooperative…rarely do you find an under 5 with the grandmother unless the mother passed away… the caregivers are cooperative.” Homabay female CHV, IDI

The evaluation team explored this with the caregivers and it was observed that approximately 56% of the caregivers mentioned that their children had suffered from diarrhoea within the last three months. The figures across the three counties were somewhat similar in terms of the proportion of caregiver that had experienced an episode/episodes of diarrhoea, with the most mentions being in Turkana county.

The study team explored what the caregivers did when they realised that their child/children had experienced an episode of diarrhoea and it was evident that approximately 61% of the caregivers took their child to a health facility.
There is a small proportion of caregivers (7%) that mentioned that they did not do anything during their child’s last episode of diarrhoea, but rather, waited to see how it would progress. This is more evident in both Siaya and Turkana counties. Further, a few old trends remain that the program was targeting but which continue to take place. For instance, about 6% of the caregivers are still going to chemists/pharmacies and drug shops to buy medicines over the counter. While this may be fine to the extent that the products that the caregivers are purchasing are ORS and Zinc, the same cannot be confirmed that they are not buying other prescription medicine over the counter.

To ensure consistency in the approach by all healthcare professionals including chemists/pharmacies/drug shops it would have been important to ensure that even these were trained and used to scale up the implementation at their outlets. However, it appears that the demand generation activities did not really cover them adequately, and thus monitoring and controlling becomes difficult to trial. This is well elaborated in the excerpt below.

“I want to believe that even those who go directly to a private chemist would also get appropriate treatment… The bit that we cannot control is what they stock or how they dispense. We try as much as possible as the government to monitor and influence what they do, but we cannot say with confidence that they stick to what should be done… Apart from having frequent meetings with them, we have also encouraged them to come together as the private practitioners to come together so that we should be dealing with the umbrella body so that apart from the regulation from our part, the issues of self-regulation would also strengthen that practice…. Yes, I would say somehow; a number of such outlets now co-pack and that is what they now try to push to people that are coming to buy ORS. But as I mentioned earlier on, the challenges of purchasing power of the consumer and the insistence that they need ORS without Zinc, becomes a challenge…however, the practice is changing towards co-packing… with the co-packing, there are better outcomes …co-packing reduces the duration and severity of diarrhoea… zinc unfortunately, was not previously recognized as having a very good impact in the outcome of diarrhoea but now that we are
Doing the co-packaging, then that has increased the demand.” Siaya County Director for Public Health, IDI.

All these elaborate that while some progress has been made towards generating demand for services for diarrheal treatment, a lot more remains to be done, not only in public health entities, but also, with the inclusion of private health entities.

With regard to care seeking behaviour for pneumonia, it was observed that almost half of the caregivers sought medical attention from a health facility or from medical personnel on the most recent episode of pneumonia that their child had.

As with the levels of awareness with regard to pneumonia, care seeking behaviour was observed more in Turkana county as compared to the other counties. It is also evident that 72% mentioned that they sought care from a health facility or medical personnel immediately and this was consistent across the three counties.
However, it is also evident that there is a sizeable proportion of caregivers that continue to wait for a while before seeking medical attention depicting the need to continued education and awareness enhancement for the caregivers of children under the age of 5 years. Overall, it is apparent that there was a demand for services from the caregivers of children under the age of 5 years.

“There is high increase in care seeking and treatment of diarrhoea both at household level and facility level i.e. there are less people coming in to the facility when they are very sick, those coming in have zinc and ORS administered already. Initially the awareness for ORS for treatment of diarrhoea was higher than Zinc, but after the introduction of the co-pack, they are administered together.” Programme Officer, Ministry of Health - Division of Family Health

g. Improvements in the Awareness of Products Used to Manage these Diseases

We also explored the level of awareness for products used in the management and treatment of diarrhoea was pursued. It was noted that 88% of the caregivers in total are aware of ORS and 53% are aware of zinc. It was observed that the levels of awareness of the ORS/Zinc Co-pack was however low at 15%. This could be attributed to the fact that the ORS/Zinc co-pack was introduced much later during the program implementation. The same trend was observed in the three counties as shown in the figure below.
Most of the caregivers across the different counties in Kenya and especially in Turkana county got to know about ORS from a doctor, medical officer or a nurse in a public health facility. This is followed at a distant by frontline health workers; with the most mentions of this type of personnel being in Turkana county.

With zinc on the other hand, a similar trend was observed where most caregivers got to know about zinc from a doctor, medical officer or nurse in a public health facility. Frontline health workers as a source of this information is slightly above 10% and this is more pronounced in Turkana county.
For the ORS/Zinc co-pack on the other hand, no variation is observed as the main sources of information were a doctor, medical officer or nurse in a public health facility at 86% and a frontline health worker at 14%. It appears that no mentions of frontline health workers were made by the caregivers in Siaya county.

However, majority of the caregivers got to know about ORS more than 3 years ago, showing that other programs before the implementation of this program could have contributed to improving the levels of awareness (noting that the iCCM was implemented in 2013 with the same being implemented in 2014 in Homabay and Siaya counties). However, it does appear that the program helped improve the levels of awareness to zinc and the ORS/Zinc co-pack as the level of awareness for these two products was mostly mentioned to have happened within the last three years.
For Pneumonia on the other hand, 52% of the caregivers mentioned that they were aware of Amoxicillin for the treatment of pneumonia in children under the age of 5 years. It is worth noting that the guidelines for the treatment on pneumonia treatment to have Amox DT as the first line medicine had not been revised when the program was implemented. Its availability and use therefore was limited (was only provided in Homabay under the program). The Amoxil referred to by caregivers therefore included other forms.
These caregivers got to know about Amoxicillin from a doctor, medical officer or a nurse in a public health facility; a trend similar to the one observed for ORS.

Knowledge about Amoxicillin does not seem to have resulted much from the program implementation as slightly more than half of the caregivers mentioned that they got to know about Amoxicillin over 3 years ago and more so in Turkana county.

**h. Improvements in the Level of Usage**

Improvements were also observed in the responses to the management of diarrhoea and pneumonia in these program areas.

“Well … ORS was there previously but the practice of giving ORS and zinc was not the norm and most of the children; if at all they were admitted, would be attended to with severe dehydration. This severe dehydration would require hospitalization, resulting in wastage of time for the parent because at that time, they would be away from home and they would be away from their other activities of income generation.
However, the initiation of ORS at the community level now negates the need for all these other things… This intervention has really helped bridge that gap…the management of diarrhoea at the household level, has greatly changed the outcome of the illness. Number one, the community health workers are able to train the mothers on certain practices at the household level that would help them prevent diarrhoea. Additionally, we’re supported heavily by our partner UNICEF on the supply of commodities; these are the ORS, the Oral Dehydration Salt such that; if at all there was a case of diarrhoea then the initiation of dehydration would be possible to happen at the household level and this one greatly influenced the outcome. We give both ORS and zinc; so, this one has greatly influenced the outcome because we are able to prevent a case of diarrhoea from transforming into very severe dehydration that would require hospitalization and also avoid the instances of death… The success story is that we can actually reduce under five mortalities that have been so high in our county; we can reduce that by simple measures of empowering the households, the community health workers and also the health workers at the facilities with the correct information, with the correct skills; provision of commodities and their appropriate management then we can save lots of lives. We can reduce the wastage time that parents take in facilities, and generally also improve the future outcome of these children because they spend when they are sick most of the times, the milestones will not be achieved… From the reports that I have received from my office and from the field is that the members of the community are grateful and the reports are that the children recover faster.” Siaya County Director for Public Health, IDI.

Feedback from the qualitative interviews was triangulated with that from the caregivers and it was observed that while most of the caregivers mentioned that they have ever used ORS (89%), less than half have used zinc and only 11% have used the ORS/Zinc co-pack.

<table>
<thead>
<tr>
<th>Which of these have you ever used?</th>
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<tbody>
<tr>
<td>ORS</td>
</tr>
<tr>
<td>----</td>
</tr>
<tr>
<td>89%</td>
</tr>
<tr>
<td>44%</td>
</tr>
<tr>
<td>11%</td>
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<tr>
<td>6%</td>
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</table>

Apart from the ORS/Zinc co-pack, slightly more than a third of the caregivers using these products started using them more than three years ago; for many, usage of these products has been within the last two years.
The caregivers (92%) like ORS because their children respond faster to treatment. On the other hand, 21% of the caregivers overall do not like ORS because it has a bad taste and also that it is not readily available (13%) and more so in Siaya county (32%).

Zinc on the other hand is liked for the fact that children respond faster to treatment (96%) and mainly disliked for its taste and issues around its availability and pricing.
With the co-pack on the other hand, the likes included the fact that children respond faster to treatment while the main dislike was about its availability.

For Pneumonia on the other hand, approximately 58% mentioned that they have ever used Amoxicillin for the treatment of pneumonia. About 46% started using Amoxil over 3 years ago.
Amoxil is liked for the treatment of pneumonia for its effectiveness (90%) while 16% of the caregivers have issues with its availability; especially in Turkana county as shown below.

Amoxil DT is not known by the caregivers and thus, its use is limited. We also observed that its availability is also limited in the different counties.

### Level of Preparedness for Future Episodes of Diarrhoea and Pneumonia

Noting the issues of availability of essential medicines for the management of both pneumonia and diarrhoea, we sought to assess the level of preparedness for the caregivers for future episodes of diarrhoea and pneumonia. It was observed that 70% of the caregivers did not have any product that could be used for the management of diarrhoea in their households. Only 1%
have the ORS/Zinc co-pack in their household, which signifies the need for intensified effort to scaling up availability and demand.

For pneumonia on the other hand, while the re-use of Amoxil or the use of antibiotics purchased over the counter is discouraged, it was interesting to note that a proportion of the caregivers still keep left over antibiotics for future use. That notwithstanding, it was found that 17% of the caregivers had Amoxil and 18% had paracetamol to manage fever for a future episode of pneumonia as shown below.
Efficiency of the Demand Generation Activities in Kenya

It was apparent that the demand generation activities were carried out in close collaboration of the county governments, the national governments, as well as other non-governmental partners. It is apparent that there was a subdivision of roles and responsibilities between all the partners. From the evaluation work, it is clear that the UNICEF C4D team was tasked with the creation of communication material for both the caregivers as well as the frontline health workers. To encourage ownership at county level, the C4D team at UNICEF ensured that materials were tailored to the local county governments, including even the county logos to encourage ownership.

It was also apparent that to implement iCCM, close collaboration was necessary between the national governments and the county governments. The national government had been driving iCCM before the restructuring of government to a devolved system and thus, had the experience and information on how to make an impact with that model. At county level, there was an attempt to engage the county governments to use iCCM to generate demand and this was evident from the wadagi initiative.

A few things affect the efficiency of the demand generation activities. Hospitals and health facilities are few in the different villages making the need for frontline health workers high. However, it appears that only 36% of the caregivers mentioned that they have ever been visited by a frontline health worker meaning that the reach would need to be scaled up.

By having only 36% of the caregivers covered, it means that information could only be provided by doctors, clinical officer and nurses, yet the interaction between these and the caregivers is limited to instances when a child under 5 years is sick. It means that there would be a need to increase the number of frontline health workers to ensure adequate coverage. Further, these would be required to ensure that they are able to follow up with the caregivers that the proposed treatment plan is followed because it appears that there was a challenge ensuring that caregivers are able to prioritise the treatment recommended by frontline health workers in addition to their other income generating activities.

“It is a challenge … like here in our area women are so much busy at the lake shore, some are trying to make the rocks they are using baiting and airing their fish. So they are very busy, you can find a caregiver at the lake shore from nine up to three and the child is left at home and it is really a problem, the medication you gave will not be given at the right time because she is busy down there so for those busy ladies we
This might have been caused by the fact that the frontline health workers are mostly volunteers and thus, require to make a living from other activities but for the demand generation efforts to be sustained and scaled up, there is need to either increase the number trained or provide a compensation model to these to ensure that they are able to supervise and follow up on the treatment that they recommend.

One critical thing that affected the efficiency in pushing for demand is the issue of distant health facilities, which makes the referral process difficult. What this means is that a frontline health worker will be able to offer the first level of care but challenges with the healthcare provision and availability of hospitals still abounds.

“This issue of transport to the hospitals is really a big issue, you find that you go to a house the child is really sick and I don’t have the drugs, I have to refer, for this child to be rushed to the hospital the caregiver will tell you they don’t have the fare to rush to the hospital and even if they get to the hospital they don’t have the fifty bob to pay at the hospital. Sometimes we even accompany them to the hospital so that the child because of being critical can be attended to and then we look for the money later so the issue of transport for the care givers is very hard, if we leave that child at home when you go for a follow up the next day you will find that she did not attend clinic so that is really a problem.” Homabay female CHV, IDI

There is need to engage county governments to prioritise the construction of additional health centres closer to the caregivers to make the referral process more seamless.

**Sustainability of the Demand Generation Activities in Kenya**

As noted earlier, the demand generation activities were implemented in close collaboration with the national and county governments. The partners and especially government partners clearly understood that sustainability of such a program can only happen with the support of government as no donor can fully sustain such programs.

“I can tell you that these activities are hard for a partner or a donor to sustain such programs, these programs can only be sustained through the ministry of health; that is if the county ministry of health and the country ministry of health own up these interventions. When you look at the number of lives saved and the children reached it is not an expensive thing to sustain these programs, as KEMRI what we are doing now is provide evidence to the ministry of health as to why they should sustain and develop these projects, we are hoping that if they do that they will own up this project so maybe the other thing that is needed is in this intervention the front line health workers need to be supervised, intervened and supervised. So without all that sustainability can become so difficult and as donors we can now do capacity building evidence to the county and tell them that this is what they need, two capacity build, give them the skills and the knowledge that they need, the health managers to mentor and monitor the front line health workers. National Project Coordinator for iCCM, IDI
Thus, the training, monitoring and supervision of the frontline health workers was driven by these governments in an attempt to improve ownership and sustainability. A good example is the Wadagi initiative that was led by the county government and which became a critical focus area during community meetings. However, a few things were observed that could affect sustainability of these demand generation activities in the three counties.

a. **Need for Demand Generation Activities Targeting All Household Members**

Most women who also happen to be the caregivers of children under the age of 5 years are not economically empowered. It also appears that these are the ones often targeted by the frontline health workers in their activations. However, there is need for these activations to cover the male spouses that also are the key decision makers in the households to ensure that the caregivers are fully supported to carry through with their recommended treatment options for sustainability.

*For mothers and grandparents is financial constrains maybe they have been given advices to undertake some issues to the child and maybe because of financial constrains they are not able to a good example is transport you are given a referral to go to facility X maybe the child has presented with a danger sign and that cannot be handled in the community as a volunteer the person will not go so the delaying, the other thing is the religious issues though in a small way some of the religious sect are also hampering some kind of treatment; like when a child is born within the first one month the child is kept in the house not seeing sunshine that means these child will lack of immunization which is basic or miss out visits by CHVs…there is also poor decision making by the head of the households. This has been an issue especially because decision making relies on the man…he is also socially and economically empowered…if he makes the decision that the child is not going to facility, it hinders the treatment choices. **UNICEF Community Strategy Focal Person, IDI**

b. **Challenges of Monitoring Private Health Providers to ensure consistency**

Earlier, we observed that the use of zinc and especially the use of ORS/Zinc co-pack is still low. However, we also observed that the caregivers seek the healthcare services of private practitioners and pharmacies as well and thus, it is necessary to maintain a uniform approach towards the implementation process. However, it was apparent that the implementers faced challenges monitoring progress in scaling up uptake of both ORS and Zinc, as well as Amoxil DT in the private health facilities. It appears that it was difficult to enforce the purchase of both ORS and Zinc in private health facilities and outlets.

*I want to believe that even those who go directly to a private chemist would also get appropriate treatment… The bit that we cannot control is what they stock or how they dispense. We try as much as possible as the government to monitor and influence what they do, but we cannot say with confidence that they stick to what should be done… Apart from having frequent meetings with them, we have also
encouraged them to come together as the private practitioners to come together so that we should be dealing with the umbrella body so that apart from the regulation from our part, the issues of self-regulation would also strengthen that practice…. Yes, I would say somehow; a number of such outlets now co-pack and that is what they now try to push to people that are coming to buy ORS. But as I mentioned earlier on, the challenges of purchasing power of the consumer and the insistence that they need ORS without Zinc, becomes a challenge…however, the practice is changing towards co-packing… with the co-packing, there are better outcomes … co-packing reduces the duration and severity of diarrhoea… zinc unfortunately, was not previously recognized as having a very good impact in the outcome of diarrhoea but now that we are doing the co-packaging, then that has increased the demand.” Siaya County Director for Public Health, IDI.

There is need to further explore, ways of engaging these private health facilities and outlets to ensure that there is consistency in approach. One of the things that seem to be contributing to this phenomenon is the availability of separately packed ORS and separately packed zinc and by creating an artificial scarcity for these products and making the ORS/Zinc co-pack readily available may assist to an extent. Thus, it will become impossible for these private practitioners and outlets to sell these two products separately.

c. **Awareness and Availability of Amoxil DT**

While the program is observed to have made an impact in improving the level of awareness and availability of ORS, Zinc and ORS/Zinc co-pack, the same cannot be said with regard to Amoxil DT. Apart from one program area where a pilot program was done to avail Amoxil DT to the frontline health workers, it was apparent that the levels of awareness of this product among both the caregivers and the health care providers was low. It was noted that the guidelines for pneumonia treatment to have Amox DT as the first line medicine was revised much later after the program had been implemented. The scale up of the use of Amox DT was therefore affected.

d. **Weak Link System with Other Health Providers**

One critical thing that affected the demand generation process is the issue of the weak link system between the frontline health workers and the other health providers. This is as a result of two things; the first, being the availability of these health providers and the second, is the issue of distance to the available health facilities. It is apparent that the frontline health workers when able are able to provide the first level of care. However, it gets complicated after that because subsequent care involves a higher financial obligation than the caregivers are able to meet – noting that a substantial chunk of these are female and depend on their spouse to make financial decisions. All the same, the issue of distant health facilities, which makes the referral, process difficult. What this means is that a frontline health worker will be able to offer the first
level of care but challenges with the healthcare provision and availability of hospitals still abounds because the caregivers have to travel for long distances where they need money to do so.

“The issue of transport to the hospitals is really a big issue, you find that you go to a house the child is really sick and I don’t have the drugs, I have to refer, for this child to be rushed to the hospital the caregiver will tell you they don’t have the fare to rush to the hospital and even if they get to the hospital they don’t have the fifty bob to pay at the hospital. Sometimes we even accompany them to the hospital so that the child because of being critical can be attended to and then we look for the money later so the issue of transport for the care givers is very hard, if we leave that child at home when you go for a follow up the next day you will find that she did not attend clinic so that is really a problem.” Homabay female CHV, IDI

“…distance from health facility is a barrier in Turkana…in the same county, there is an issue with the high level of illiteracy resulting to low awareness of treatment…in other areas, caregivers tend to seek medical practitioner when it’s too late, this is because they first wait and observe if the diarrhoea stops…sometimes the caregivers are not the main decision maker and have to seek finances and consent before seeking medication for the child.” Programme Officer, Ministry of Health - Division of Family Health

There is need to engage county governments to prioritise the construction of additional health centres closer to the caregivers to make the referral process more seamless. Further, there is need to have more frontline workers covering a manageable area without straining them.

“For the weak link system in Turkana its addressed through restructuring with support from UNICEF, whereby they have started training from the managers then the CHEWs who included churches of health facilities so that the system works in a coordinated way. Initially in a community health unit, we used to have 50 CHVs, but in the new restructuring, it is about 10 CHVs per community health unit. A CHV should just be in-charge of one village, and a stipend has been introduced by the county government. Homabay was the first to start reducing, hence the rest of the counties are using it to benchmark.” Officer in charge of Integrated Community Case Management at national level, Ministry of Health, Neonatal Child and Adolescent Health Unit, IDI

Even then, with the construction of additional facilities in the different villages, the need for frontline health workers needs to be maintained as these are able to provide the first level of support and linkage to the other health facilities.

“The community health workers help with health promotion mainly, health promotion, creation of demand for health services and then now in Siaya, the treatment of malaria for children under five; treatment of diarrhoea and making a diagnosis of pneumonia and referral. Referral of mothers for ANC visits, follow up and follow up of these mothers to ensure that we have a high coverage of skilled delivery and also even in certain surveys, yes and household registration that they do twice in a year… These are people who are walking into people’s homes…they face challenges that we can address…there are certain cases where some other people keep dogs which attack them as they are walking around the community, there is the issue of getting wild animals at times as they go to provide support…then there is the bit about volunteering such that there had been no compensation for that until the county adopted giving them a stipend of 2,000 per month. Still not enough and there have been issues of that being low. However, our county is the only county that currently pays that stipend of 2,000 per month. Other issues that have been brought to my attention is the need for torches for them to use at night as they offer support, the need for raincoats, the
6.1.3 Improving Service Delivery in Kenya

The service delivery activities were aimed at supporting Kenya scale up the implementation of the Integrated Management for Childhood Illnesses (IMCI) in primary health facilities and Integrated Community Case Management (iCCM) in underserved areas. The service delivery activities were geared towards expanding access to effective integrated treatment services for diarrhoea and pneumonia at community and front-line health facility level and further generate local evidence that would inform policy on the treatment of childhood pneumonia by CHVs.

The Need for the Service Delivery Component

To offer some background, it is worth noting that Kenya since 2006 had been implementing a Community Health Strategy that intended to deliver services at household level through volunteer CHVs supported by facility based healthcare providers. The CHVs were expected to visit households to provide health information, basic preventive interventions and referral of sick children. To address the unmet need for treatment against the major killers of children, especially those living in underserved areas, the MOH with support from UNICEF and other partners in 2013 adopted iCCM; a community-based strategy that aimed at reaching children with limited access to health facilities with treatment and related interventions against the common killer diseases of children through trained, supervised and supplied CHVs. Guidelines and tools to support implementation and monitoring were developed and partnerships strengthened to accelerate the drive towards meeting the MDG 4 target and the program was implemented through various activities. It is worth noting that the implementation of iCCM and IMCI was led by the MOH through the Unit of Neonatal, Child and Adolescent Health at national level and County Health teams at county level and that a National iCCM Task force was established to guide and coordinate implementation and monitoring of iCCM. This task force was expected to report to the Child Health Inter Agency Coordinating Committee (Child Health-ICC) and the following partners supporting iCCM were members of the task force: UNICEF, WHO, USAID, CHAI, Kenya Red Cross, World Vision, Save the Children (SAVE), Micronutrient Initiative (MI), and KEMRI.
Thus, in 2013 when UNICEF embarked on the task of supporting Kenya scale up the implementation of IMCI in primary health facilities and iCCM in underserved areas under this program, it anticipated to support the implementation of this component both at national and county (devolved/local) level in the program areas. However, the restructuring of government following the Kenya Constitutional promulgation of 2010 from a centralised system of government to a devolved system of government affected and slowed down the establishment of similar structures at the county level, to coordinate with the programs at national level. Thus, a different approach was adopted for the different counties during the implementation.

In Homabay county, KEMRI had on-going programs and UNICEF partnered with this organisation to implement a research project in 2013 to generate evidence on whether CHVs can effectively identify and treat children with pneumonia with Amoxicillin DT to help inform national guideline policy change, manage commodities and provide timely reports on interventions. This was further complemented with service delivery activities at the health facilities as well as through frontline health workers using an iCCM model. Further, in both Siaya and Turkana counties, it appears that the service delivery component was implemented through the health facilities and through iCCM. Through the iCCM model in the three counties, CHVs were providing treatment against diarrhoea with ORS and Zinc, testing children with fever using RDTs and treating those testing positive for malaria, identifying and referring children with acute malnutrition and new-borns and children due for immunization.

For one to understand the significance of the programme, it is important to understand the context under which it was being implemented in Kenya. These are communities (in Siaya, Homabay and Turkana) where the care giving role is predominantly female driven through the female parent at the first level, and through female relatives at the second level. These females while noted as the primary caregivers do not have decision making abilities and thus are limited in terms of what they can do for the children under their care. Further, they are responsible for carrying out other domestic activities in their households and farms and therefore rarely have time to pursue the healthcare needs for the children under their care unless the child is at a critical condition and this is evidenced in the narrative below.

“... some of these marginalized areas have weak health systems i.e. a health facility could be covering a wide area and it’s not able to get to the entire catchment population. In some of the facilities in the rural areas particularly the dispensaries they are actually managed by patient attendants and not qualified health workers and that becomes a challenge when you have a child with complications e.g. severe diarrhoea,
then you need a trained health worker to attend to the child which is not available. In some facilities, the health care worker may not have the right capacity to manage diarrhoea and pneumonia, because in order to treat these two diseases one needs to have undergone Integrated Community Case Management. Some of the health workers in the facilities have got the basic training nursing or clinical officer training and so there is capacity challenges that affect access to health services.” Save the Children Representative, Turkana, IDI

Thus, it was necessary to ensure that care is closer to them for the health of the children under their care to be addressed. With health facilities being miles away, this is often difficult and this has been recently addressed through the iCCM model where frontline health workers drawn from the communities provide first line treatment and care at the community.

“Because we were basically waiting for people to come, when they get sick to come for treatment which we thought was not a good thing because as you wait disease progressed so we said instead of waiting for them to come we are going to them so this is the concept of community health workers, each community health worker has fifty to a hundred household, he or she is really watching so should anything come up she is called, we arrest the disease in the infant stage and it couples with lack of access to facilities, we still have a challenge, poor infrastructure and also long distances, the time a person comes, if it’s critical most were dying on the way especially children so that’s why we said let’s put this front line so that they can reach them quickly.” Chief Officer of Health in Homabay County

“The frontline health workers …they’re the ones that meet clients at the first time, they’re the ones that take the history and make the diagnosis and then they dispense the medicine before the next level of care…we have different levels of care; at dispensary level, you’d find between one to four nurses; we have a facility in charge, one of the senior most is the one who is in charge of that facility; at a health centre, you’ll find a larger team of health workers; even the cadres would be much broader. You’ll be having clinical officers; laboratory and nurses but we have one facility in charge who is in charge of all of them; at the bigger facilities, the level four facilities; we have many more health workers, they can offer a wide range of services but we have a medical superintendent who is in charge of them… The facility in charge; at a sub county level, all the facilities over there report to the sub county health management team headed by the sub county medical officer of health… The sub counties report to the county level where the county director of health is in, the routine reports are sent on monthly basis but we also have certain disease conditions that are reported in IDSR on a weekly basis.” Siaya County Director for Public Health, IDI.

Activities Conducted Under the Program to Improve Service Delivery

The service delivery component was mainly implemented through various activities but mainly through iCCM. First, there was need to create an enabling environment for the improving service delivery component, whereby various partners adopted new WHO guidelines on classification and treatment of childhood pneumonia. Further, research on Amoxil DT in Homa Bay where a pilot program was implemented in 17 hospitals in close collaboration with Kemri-Welcome, in addition to an Amoxil DT packaging initiative in close collaboration with PATH. However, most important was providing support to iCCM.
First, an iCCM taskforce was created at both the national level and at county level to increase partnership for iCCM. This taskforce championed the existence of a national framework and M&E plan for iCCM as well as training manuals to be used. It was done in collaboration with a variety of partners. Further, CHV job aids and iCCM household booklets were prepared as mentioned in the previous section on demand generation. It is under this that the leadership challenge called the Wadagi initiative was launched in 2014 in Homa Bay and Siaya counties to increase support to CHVs (iCCM was however rolled out in 2013). A similar approach was attempted in Turkana later in the project and would require close follow up.

All in all, it is reported by UNICEF in its DFATD: Improving Treatment of Childhood Diarrhoea and Pneumonia: scaling up coverage of ORS, Zinc and Amoxicillin final summary presentation that 5271 iCCM were trained and these included CHVs, CHEWs and frontline health workers in the three counties. Specifically, in Turkana county, it was reported that UNICEF supported the reorganisation of CHS and further, the employment of 130 CHEWs. At the time of the evaluation, there was ongoing support to model iCCM to the nomadic population.

**a. Selection of Frontline Health Workers in Kenya**

All in all, for the same to occur there was need to ensure that frontline health workers were available before training could occur. In the selection of these, it was noted that these were drawn from the local communities and selected by the local communities.

"… it is the community that selects the CHW who is supposed to be trained and linked to the health facility. This way, the CHWs have influence over the decision of members of this community." *Save the Children Representative, Turkana, IDI*

In terms of their qualifications, this varies. In Homa Bay county, it was observed that most of these have some bit of formal education while others do not have. The critical factor observed is that the communities choose them and this is based on factors such as respect, interest in the subject and interest in learning.

"The qualification [of frontline health workers] varies. The community chose them based on respect, interest and also some understanding of medication, we have a mixture of community health workers, there are those who have finished form four [secondary education] and there are those who by virtue of having been experienced by their own way are able to treat, are able to diagnose or whatever it is, we did not chase anybody away because of education because some people are more experienced but no education so
In other communities such as those in Siaya county, the community selects people that have the ability to read and write for ease of training, in addition to being regarded with respect in their communities. They must be people willing to support the communities even when in difficult circumstances.

“… Yes, they are actually selected by members of that community… Somebody must be able to read and write so that we’re able to train them, they should be people that are accepted by the members of the community that they’re going to serve because you realize that these are the kinds of people that you can call at night that my child is sick; if it is someone who probably their integrity is in question, somebody that disappeared with someone’s bicycle then the village would not want such a person visiting every household… Yes, issues of honesty, issues of ability to talk to people and convince them with health messages… Most of them are female in our county… I would say volunteerism and also probably because a number of males would rather be running around doing other income generating activities… Yes, they are taken through the packages of community health strategy…this training takes two weeks… After the initial training on the roles of community health workers and what community health strategy entails then we have other trainings that are specific on certain packages… These other trainings would be done by our TOT’s, our community health assistants or if it is something specific; for example, on HIV, then we have a team that has been trained as T.O.T to train them; if it is on ICCM, we identify her group in that sub county, they're trained by health workers that have been trained to roll out with the specific packages…” Siaya County Director for Public Health, IDI.

In Turkana county, a similar trend was observed in terms of their qualifications. They have to have at least a secondary school level of formal education and are mostly women.

…Be literate and a form four leaver. However, since illiteracy is high in Turkana, innovative ways are used to train those who are illiterate to deliver the same service… they are mostly female… women are more likely to volunteer services while the men are the key income earners. Women relate more with matters regarding health of the child; since majority of the caregivers are female…they are mostly trained for one week… After the one-week training, they are closely supervised by the CHEWs, and when a gap is identified, their skills are reinforced…Yes it had been discussed in the ministry that they shall be given a stipend of Kes 2,000 per month, though this does not happen in all counties, some are purely volunteers…they also have other additional jobs. Programme Officer, Ministry of Health - Division of Family Health

This model of getting people from their communities and with the selection of the community members helps with the process of interaction.

“You know you are working within a radius of probably let me say around five hundred meters from your house hold which means in one way or another this are your relatives, in one way or another you are related, so there is no fear of moving from one home to another one….” UNICEF Siaya County Coordinator, IDI
b. Gender of the frontline health workers

In terms of gender, most of the frontline health workers are female. This is because the issue of childcare is still regarded traditionally as a mostly a female task and thus, females are more comfortable interacting with other females.

“… most of them were female anyway but now we have male as well…we have more women than men because traditionally it was meant for women but we have so many male community health workers… You see sometimes even those women does very well in waking up than men because they feel the pain of the children more than men but yes I can’t say it is discriminatory no, males are catching up.” Chief Officer of Health in Homabay County

“[the CHWs/CHVs/Front line workers] are mostly female. Maybe slightly more than 70% are female… For us women being the majority for us we have seen that it is a positive thing because most of the time you will find the caregivers are mostly female especially to young children so we find it easier for a mother to talk to a mother and even in the social norm the father is comfortable when the mother is with a lady that with another man so we have seen that the female CHVs are more dedicated than the male in terms of retention they are even better.” National Project Coordinator for iCCM, IDI

The selection of female frontline health workers is also informed by the perception that women frontline health workers relate more with matters regarding health of children because majority of them are caregivers as well.

“… they are mostly female… women are more likely to volunteer services while the men are the key income earners. Women relate more with matters regarding health of the child, since majority of the caregivers are female…” Programme Officer, Ministry of Health - Division of Family Health

Then there is the issue of credibility of the messenger before the caregivers. It was felt that there is a perception that a female frontline health worker appears more credible when giving information about childcare as compared to a male one. This is especially so because childcare is still heavily regarded as a female domain.

“Many women would like to be assisted by the other women. It has not come to the point of diarrhoea management. Due to community dynamics, there is the need to have all the CHWs female, but these are hard to reach areas hence there is the need to have both male and female CHWs…In the current program most CHWs are female.” Save the Children Representative, Turkana, IDI

This was explained to be driven by historical reasons where most frontline health workers have been female and thus, the notion that this is a female role.

“I wouldn’t say yes or no, because I really don’t have any hard evidence on that, but I will think when it comes to things like child caring, how much credibility would people attach to the male versus the female is yet to be seen. However, I think when we look at the traditional gender role that is likely to impact on that. Typically, we do not have a lot of males CHVs, probably because that is seen as the domain of women, but where there are males, they have not necessarily done less quality jobs than the females. What we need to probably do is to have experience that males could be effective CHVs, so how can we attract more.
we are talking about men talking to men, it is probably the most effective way to go, because most African cultures are trained not to listen to the woman. Chief - Communication for Development in the UNICEF Kenya office

Then there was a perception that female frontline health workers are more effective at reaching out to caregivers and persuading them to seek care and to adhere to treatment; a task they do better than the male frontline health workers.

“\textit{The female CHWs are more effective in reaching out to caregivers and changing, persuading them to seek care to adhere to treatment. The challenge with the male CHWs is that they will attend the training, but afterwards they will resume in other income generating activities to provide for their families and not take this as the only thing they are doing which is not the case with women who are sufferers or have children who are sufferers hence show more commitment, this impacts them directly.}” \textbf{CHAI Representative, IDI}

There was also a counter argument that male frontline health workers are critical because most of the health emergencies happen at night and men are more willing to leave their houses to go and provide support as compared to the females due to security reasons. We pursued the same with the caregivers of children under the age of 5 years and observed that frontline health workers in their communities are mostly females (76%) and especially so in Siaya county (96%). The highest of the portion of male frontline health workers was observed in Turkana county where 53% mentioned that they were male. Further, in terms of preference, there is a higher (73%) preference for female frontline health workers as compared to male ones – with the exception of Turkana county where there is an almost 50:50 split between the preference for males and the preference for females.
All in all, it was observed that due to the selection process of these, most of the communities (63%) generally accepts and relates well with them.

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**c. Training of the Frontline Health Workers**

Once the frontline health workers were identified, they were taken through a training program.

“this programme was implemented in various stages. The first stage involved the orientation of county leadership on iCCM (Integrated Community Case Management). This was followed by stage 2; building a critical mass of trainers who trained the community health volunteers and CHEWS and finally, this led to stage 3 where we scheduled monitoring visits “Programme Officer, Ministry of Health - Division of Family Health

“The guidelines have always been there under IMCI; the practice though has not been as strong as it is right now…” Siaya County Director for Public Health, IDI.

The main training was carried out over a period of roughly a week in most of these counties (the main iCCM training was preceded by basic training and orientation for the CHVs, which took about 2 weeks).

“… I trained in 2014 by ICCM… The training was for six days… The training really was effective enough, I came out of the training with a lot of knowledge that I did not have before. I went for the training not known in the community as a CHV but after the ICCM training I came to be known in the community as someone who can help anyone with any sickness; a child, a pregnant mother who is suffering or anyone else…” Homabay female CHV, IDI

The training was carried out by nurses and clinicians who were first trained then given the mandate to go and train the frontline health workers.
The approach used by UNICEF was to first create a pool of trainers of trainers (TOT), who would be responsible for doing the subsequent training at the county level. In Turkana County, we had TOTs at ICCM, in IPC i.e. the people used for actual training at the sub-county levels. For the training we would work with the coordinator, the director at the county level and the people trained were the ones engaged in these trainings. *Save the Children Representative, Turkana, IDI*

“First we had to train the nurses and the clinicians who then went and trained the community health workers… the interventions were started from the top, so it is like everyone is sensitized. *National Project Coordinator for ICCM, IDI*

“The first is at the level of the facility … we sensitized the health workers at the facility level on the current diarrhoea management and also informing them of the plan to scale up this to the community level, after that we did the revamping of the ORT corner or rehydration therapy corners in all of health facilities so that if a patient goes to the facility with diarrhoea they use the same management protocol to manage the patient then at the community we now trained the community health volunteers on the current diarrhoea management then gave them supplies to offer this services.” *UNICEF Siaya County Project Coordinator, IDI*

The content that frontline health workers were trained on covered a variety of issues including the management of diarrhoea according to IMCI guidelines.

“It's because all our health workers, in this support where we were training community health workers on ICCM; we also trained health workers on IMCI and health workers manage diarrhoea according to IMCI guidelines such that even in our facilities, we have established ORT where it is ORS and zinc that is the main stay before we go to other modalities like giving intravenous treatment and for diarrhoea, it is the rehydration unless we have a reason to believe that there is a bacterial infection, that is when we go to antibiotics.” *Siaya County Director for Public Health, IDI.*

For instance, the community health volunteers were trained on management of diarrhoea at the community level through classroom training, given the right tools and were provided with supplies to manage these cases at the community level. *CHAI Representative, IDI*

The training program also covered pneumonia disease management as elaborated by the excerpt below.

“Yes, pneumonia treatment in relation also to this program in our county; we conducted a training for the community health workers in detection of pneumonia, a child who has a cough and the number of breath sounds because they have been trained that you can detect pneumonia by the increased, the rate of breathing and then based on that; if at all it is determined that it is pneumonia, they would be referred to health facilities for antibiotic treatment.” *Siaya County Director for Public Health, IDI.*

These were not the only diseases covered in the training program but rather, it covered a variety of issues on child health in an integrated approach.

“Our specific task was to train the community health volunteers to be able to deliver the messages as part of the ICCM intervention and train and support the sub county and the county management team also… These activities were integrated we delivered both the diarrhoea and pneumonia as integrated intervention so it was nothing specific for pneumonia so when you are given health education, you are given for both
To ensure that the frontline health workers as well as the other health workers understood the content of the training, they were introduced to a basic training package to health them understand community health issues in general. After this, they were introduced to different detailed health training programs.

“At national level we were training TOTs – trainers of trainers at county level before they are rolled out and scaled up the particular interventions in Homabay, Siaya and Turkana. We are also doing community training in the basic package i.e. before the CHV is trained on other modules like the ICCM; they have to undergo the basic module. We teamed up with the community health services research like trainings in Homabay, Siaya, Turkana and the others. The ICCM Training has four main components: malaria, pneumonia, malnutrition and diarrhoea, which are killer diseases for new-borns. We train the TOTs on malaria on RTD – Rapid Diagnostic Testing in malaria zones in Western, Nyanza and the Coast region, which if positive they give anti-malarial drug. For diarrhoea they assess if not more than 14 days and does not have blood in stool they treat using ORS and zinc. For pneumonia, they are taught to count breaths for 2-12 months if the child is breathing more than 50 per minute, which is fast breathing. In most regions, the CHVs do not treat, they refer. In Homabay where the research was going on, they were treating with amoxicillin. For malnutrition, they use the MUAC test and if the readings are at red, then they refer. If yellow, the children are referred and treated at feeding centres. For new borns they are given a checklist which contains 11 danger signs...We also have health promotion in terms of health seeking behaviour: washing hands, disposal of stool for new-borns, exclusive breast feeding.”

Officer in charge of Integrated Community Case Management at national level, Ministry of Health, Neonatal Child and Adolescent Health Unit, IDI.

It appears that the trainings were conducted in a mixed model approach where the first days had a residential training approach, followed by training at their link facilities. Further, the training program anticipated continuous medical education expected to be taken while on the job.

“...this was mainly done through trainings; we conducted some residential training but to reach all health workers, it is through on job training such that the teams that have been trained back at their facilities they share with the other health workers in establishing owners and having the good practices...Apart from sharing of knowledge through CME’s the Continuous Medical Education: it is through, showing through practice such that the on job training is the training that the health workers on practice, a child is there who has diarrhoea; moderate diarrhoea or mild diarrhoea and then the person who has been trained trains the other people on how to mix the ORS, how to determine whatever quantities to be given.”

Siaya County Director for Public Health, IDI.

The feeling was that the training was quite detailed in its approach to enable disease identification and treatment, support or management.

“The training generated a lot of interest now on looking at the cough together with the way a child is breathing and then with now proper diagnosis in place, that is when the health workers are now prescribing Amoxil for treatment of pneumonia.” Siaya County Director for Public Health, IDI.
After training, the community health workers were taken to link facilities where they were monitored to check their competencies and eventually, those that were certified were then released and facilitated to begin work in their communities.

“The initiative, that is what we did together with the support from UNICEF was to have an iCCM training for all our health workers and then after that training, they were taken to the link facilities where they were monitored to check their competencies, those that were certified and could offer training were then released and facilitated to start giving the treatment… Apart from capacity building; the training and also to make sure that we have given them commodities; giving them commodities both the test kits and the drugs for the management of the conditions…for diarrhoea, we gave the ORS/Zn co-pack.” Siaya County Director for Public Health, IDI.

d. Equipping the Health Workers with Essential Supplies

After training, and after certifying that they had learnt what they were required to have covered, and before sending them back to their communities, the frontline health workers were equipped with essential commodities for them to carry out their work.

“first phase was to train the community health workers and make them ready to know how to treat this conditions…the second phase was to give them commodities so that they can start doing their work, the third phase now is to give them cell phones for communication and also reordering of supplies.” Chief Officer of Health in Homabay County

For the management of these diseases that were under focus in this program, the frontline health workers were provided with ORS and Zinc only. Amoxil DT was only provided in Homa Bay where a pilot program was being implemented to document its use.

“for the management of these diseases, we only had ORS and zinc. Amoxil DT is for Homa bay because it was under a pilot program. So in Siaya we still refer all the cases of pneumonia to the facility.”UNICEF Siaya County Project Coordinator, IDI

But even those frontline health workers to whom Amoxil DT was available noted the differences in terms of what was being replaced – the Amoxicil suspensions.

“The amoxicillin DT training started in 2015. Before they were using the syrup and then the dispersible tablets came in…The volunteers liked it better than the suspension, which was bulky. The country is shifting from the syrup nowadays, which is a decision at the policy level. We are bringing in the consignment to roll out this in the whole county and phase out the suspension.”Siaya County Director for Public Health, IDI.

The results of the pilot programme appear to have made an impact in that as a result, the county government had taken up the initiative to procure Amoxil DT to scale up its use as shown in the excerpt above.
e. **The Responsibilities of the Frontline Health Workers**

The responsibilities of the frontline health workers were to first, enlighten the communities on various issues touching on the health of children.

“…one core business of community health volunteers is health promotion so they teach parents at the household level.” *UNICEF Siaya County Project Coordinator, IDI*

“In fact it is to educate the community, make them know and understand the side effects and make them know what makes this disease to come to the community…some people are not cooperative. In the community some men are not cooperative … they don’t want to put up toilets in their households and you can see someone going to the toilet at their neighbour’s compound which is not good especially when there is a diarrhoea outbreak …the mothers who are the caregivers are cooperative and the under 5s are taken care of. It is rare now to hear that there is a death because of diarrhoea for an under five.” *Homabay female CHV, IDI*

Additionally, they were also meant to provide the first level of care and treatment to the children in their communities.

“Whenever I am called over or told there is a child suffering from diarrhoea in a household, I just rush there carry my kit with me…I will have to find out when the diarrhoea started. I will ask the care giver to give me the child’s immunization card and from it, I will record and know the age of the child to help me know how I will give the treatment… So afterwards, I will ask for water. Once I have been given the water, I will show her the packet and how to pour the ORS. I will show her using one packet how to mix for the child depending on the age of the child and then advice how it will be given to the child, when the child is thirsty until the child gets better. Also for the zinc, I advise that it is given as per the age…all the ten tabs until they are finished to enable the diarrhoea is over or to avoid the same experience in a while.” *Homabay female CHV, IDI*

f. **Supervision and Support for the Frontline Health Workers**

In some areas, such as in Siaya county, the frontline health workers were provided with a monthly stipend to cover some of their costs (provided by the county governments according to the guidelines provided by the departments of community health services under the Ministry of Health).

“… We give them a stipend of 2,000… they’re volunteering in this and if someone is a farmer; he still does his farming business, it’s not a full time employment…Yes, they do their other activities but they also attend to their neighbours; they go to visit them when children are sick and the rest… Each community health worker takes care of 100 households but the villages have a different number of households. Therefore, there are some villages that would have more community health workers than the rest but I am surprised to say that in our county, we have 100% coverage… The role; after the training on ICCM, their role in treatment of diarrhoea is that they have even at the household level, ORS and zinc; the core packs so that they’re the ones who initiate the treatment in children under five at the community level; malaria also, they have RDT, the Rapid Diagnostic Test kits; they test children and for those that are positive, they initiate
treatment at that level… For pneumonia, they make the diagnosis and then they refer.” **Siaya County Director for Public Health, IDI.**

As noted above, each community health worker was responsible for approximately 100 households and it was claimed that there was 100% coverage. However, it was not confirmed how this figure was estimated because data from the household interviews with the caregivers mentioned 36% coverage as shown earlier. Thus, the evaluation team sought to understand how supervision was carried out. It appears that there was a variance between the different partners as to how often the supervision visits were conducted. To some, such as in Siaya, supervision visits were conducted quarterly.

“So far as me as the director, I would say quarterly but we have the community health extension workers, the community health assistants who are supposed to be with them on a monthly basis… we look at the number of the children that have been, the number of households that have been visited with health messages, the issues of commodity management whether their reports are good, how they are bringing these reports to the link facilities… We have a checklist that is standard and we use that… The community health assistants, with them, they work with the CEOs like they actually communicate even all the time but for the county team; we plan for a supervision, we go through the checklist, we look at how those particular units performed previously before we go over there.” **Siaya County Director for Public Health, IDI.**

Moreover, even within the same county, there was inconsistency in the frequency of supervision visits among the different implementing partners.

“Normally I would say monthly...the other thing that we can also say is that it depends on a program’s priority…” **UNICEF Community Strategy Focal Person, Siaya, IDI**

In others, such as was the case in Homa Bay, these supervision visits were mentioned as having been conducted on a weekly basis if there was need but mostly on a monthly basis. The supervision visits in Homa Bay appeared better structured because the CHEW supervising the frontline health worker would go through their daily reports and provide support on issues such as shortages of commodities. This could perhaps have been attributed to the Amoxil DT pilot program.

“When treating a pneumonia child there is a number we were given. After you give pneumonia treatment you call the number toll free and from there, a nurse will be sent. This number we call is in our sick child treatment record form...when you text this number someone will call you back and inquire whether it is one or two children that you attended to and they will want to know the village where that took place and the name of the child. They will also ask for the number of breathes as per the age of the child, then she will ask you how you managed the treatment as per the age and after you have explained and they will ask you continue monitoring. After that a nurse will come to the ground and call you. She will find out where you are and tell you to take her to see the baby... as long as you have treated a child and you have sent them that SMS report, within two to three hours the sister will be on the ground...She will use the timer to countercheck and see whether it was really pneumonia. Of course the breaths will be less because you
already gave medication and she will also make her record. After that the CHEW will come within that week to supervise what I have done. Then at the end of the month, we sit down and go through the report… not just the treatment I have given any work I have done in the community is supervised by my CHEW or any time that I have a problem I will call and tell him… he will assess what is lacking, and take the request to the people concerned…then we get drugs. These meetings are helpful, very helpful because if there is something I did not understand or do correctly, the CHEW correct me and show me how I may do it so that I don't repeat the same mistake again.'Homabay female CHV, IDI

Among those expected to supervise, the frequency within which they indicated that they supervise was more frequent as compared to what the frontline health workers themselves indicated.

“I normally supervise them from Monday to Thursdays and on Fridays, we normally have the village groups or the sub location groups to discuss the issues, just community health issues in the community but supervision, we normally supervise them from Monday but it’s not easy because of the means of transport; yeah, since I’m covering three units and I have 54 CHVs’, it’s not easy.'CHA, Rarieda, IDI

This elaborates a clear inconsistency and there is need to monitor and track that these supervision visits actually happen. This variance in practice as to when supervision visits were required was most felt by the national government because it resulted in inconsistency of information sharing such that partners at that level did not have adequate and consistent information flow.

“After devolution the partners would go behind and work directly with the respective counties without giving reports at the national level; not sharing information about the counties, hence multiple partners not being at par. Inadequate or delay in accessing funds by the partners hence delay in activities and not achieving the set objectives.'Programme Officer, Ministry of Health - Division of Family Health

Thus it was necessary to explore whether there existed a structure through which the supervision visits could be carried out and it appears that there was one.

They are organized under every sub-county. At the sub-county level, the CHV report to the community health coordinator reporting to community health services coordinator, who reports to the main county health team… The community health workers report to the CHEWs…There exists a community health unit, in order from largest to smallest: there are the CHEWs who exist on two levels i.e. at the health facility level then at the community level. Next are the CHWs and finally the CHVs. Programme Officer, Ministry of Health - Division of Family Health

Thus, it is clear that the structures do not appear to exist beyond the county level to trickle information back to the national level for planning purposes. All the same, there was clear need for the supervision visits to be carried out frequently as echoed by some of the partners. The supervision visits should further be complemented with quarterly meeting to ensure that there is continued learning and improvement in the implementation process, as well as facilitate dialogue.
Establishing regular supervision (with associated challenges that may hinder this; such as human resources, being looked into) and consistency in information sharing should be relatively easy to implement because there exist materials prepared to guide the supervision process at both facility level and at community level. This tool points out to things that need to be reviewed.

“Of course we are using a tool and in the tool there are so many areas we are looking at, actually all areas, first we look at the issue of interest structure then we look at issue of service delivery… Like if you go to a facility we want to see whether there is an area designated for ORT therapy, oral orientation therapy in that facility, is it functional, is there a book where they record the cases that they have seen for diarrhoea and how have they managed, we look at the records, health information, look at how the reporting is been done, whether malaria cases are been managed well because we want to see whether children are managed with ORS and zinc, how is the diagnosis been done, are they classified according to the way they were trained. Then we look also on the issue of, I have talked about health information that is not under infrastructure, then we also look at the issues of commodity, health availability, do they have stock of ORS, zinc at the facility, find out whether there is a deficit we need to top up, how is the utilization, are they doing the documentation properly then we also look at the issue of the equipment’s like those respiratory timers are they having them, are they still functional, we also go further to find out whether they are using, there is something called the sick child recording form to be able to diagnose, that is now at the community level and are they able to diagnose well, randomly we sample, take just one card and check if it take through… it is a standardized tool.” UNICEF Siaya County Project Coordinator, IDI

All that would be required would be to harmonise these tools to ensure that the information that the national governments gets is consistent and comparable.

Effectiveness of the Improving Service Delivery Component in Kenya

The efficiency that was achieved by improving service delivery can be seen in a number of factors as elaborated below.

a. Information to Caregivers was Made Available at Community Level and in a Language Caregivers Understand

It was possible through the program to generate demand by educating the caregivers. Using data obtained from the caregivers, it is apparent that almost a third frontline health workers have been a source of information on disease management for children under the age of 5 years, yet
only 36% indicated that they have experienced a frontline health worker visiting their household for the same.

As these two figures are close, it goes to show that increasing coverage for frontline health workers would possibly result in the improvement of various health indicators because they are a good source of information at community level. That notwithstanding, there is need to cover personal conduct and interpersonal relationships to improve the type of contact that they have with the community members as only 15% of the caregivers mentioned that they trust information from this source.

All the same, the frontline health workers are able in bringing the gap by educating the caregivers, and especially so in a language that they understand.
…. in my community, I do my normal house chores as a wife, at around ten I go out to visit the identified households, when I go to a household and I want to talk about how to deal with diarrhoea at home, I have my bag with the drugs and everything which I was given by the ICCM team with me and I go to a house hold. Once there, I speak to the caregiver and explain to her more about a subject such as diarrhoea…I make her understand the subject in mother tongue or any other fluent language that she can understand”

Homabay female CHV, IDI

b. Meeting the Demand for Services Generated at a Local Level

The program was able to meet the demand created by the communication strategy by making available frontline health workers that were able to meet the communities' needs for children under the age of 5 years.

“I got involved as a CHV in 2010 but I came to understand and know more when we were given some training with the ICCM team when they came down to our region. After that I came to learn more and know more about how to be a CHV, to know more about the diseases of under five and from there I came to know how to conduct my activities in my community... I did the mapping of all the households and the under 5s I have in my village as well as the pregnant women there and knowing who is in what household then from there I could know how to go about when the child of under 5 is sick” Homabay female CHV, IDI

Thus, even among the caregivers, there is general consensus (69%) that the frontline health workers have been able to alleviate or lessen the challenges faced by women in their communities when it comes to seeking care for their sick children.

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<tr>
<th>Do you feel that these workers have been able to alleviate or lessen any challenges faced by women in your community when it comes to seeking care for their sick children?</th>
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<tr>
<td><strong>Yes</strong></td>
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<tr>
<td>Total(392)</td>
</tr>
<tr>
<td>Homa Bay(135)</td>
</tr>
<tr>
<td>Siaya(131) County</td>
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<tr>
<td>Turkana(126)</td>
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Indeed, this impact has been felt in Turkana that is a hardship and arid zone that has been marginalised for years but which, as a result of the program, notable changes have been observed in the incidences that are not possible to manage.

[the biggest impact of the program] …Rolling out of ICCM which did not exist in Turkana, which made people realize that there is no need of children dying in the villages when we can make this treatment available. Save the Children Representative, Turkana, IDI
However, the coverage of the frontline health workers needs to be scaled up because it appears that the frontline health workers are not able to have complete coverage because based on the data collected during the external evaluation, only 36% of the caregivers mentioned that a frontline health worker had ever come to their household to inform them about pneumonia and diarrhoea disease management in children under 5 years.

All the same, there has been a notable reduction in severe sickness and casualties as mentioned by the health workers operating in these counties.

“…at the health facility, there has been a notable reduction in cases of children being admitted with severe dehydration ….,” Siaya County Director for Public Health, IDI.

“Children used to die before reaching the health facility. Initially caregivers were either not bringing children to the health facility or were bringing them when it was too late when they had dehydration leading to death…now, CHVs and CHEWs have increased access to diarrhoea treatment and for the severe cases they refer the caregivers to the health facilities. They also educate the caregivers on the reason for seeking treatment.” Programme Officer, Ministry of Health - Division of Family Health

Thus, through the program, equity in coverage has been observed.

“In a way, because the way ICCM is designed to enhance equity coverage and access issues. That is why we have the CHVs in all those hard to reach areas…in at least every village there is a community health volunteer in that village, CHVs who will be able to go to this household which was otherwise inaccessible to health services due to health issues and financial issues. They will get something… because the CHVs can walk and give treatment in the house level…CHVs will be able to attend to that so in a way the program is trying to sort those issues.” UNICEF Siaya County Project Coordinator, IDI
c. **The Service Delivery Component Has Been Able to Build Local Capacity in General**

The program resulted in the building of capacity to improve the community’s knowledge as shown in the excerpt below.

> “The program is building capacity in general i.e. improving the community’s knowledge, helping them identify the signs e.g. if a child has fever it could be pneumonia, wet stool indicates diarrhoea, bloody stool indicates severe diarrhoea and one needs to seek treatment.” **Save the Children Representative, Turkana, IDI**

> “The program is building capacity in general i.e. improving the communities’ knowledge, helping them identify the signs e.g. if a child has fever it could be pneumonia, wet stool indicates diarrhoea, bloody stool indicates severe diarrhoea and one needs to seek treatment.” **Save the Children Representative, Turkana, IDI**

Further, the program has been able to provide structures for supervision of the frontline health workers; continually building on their capacity.

> “This program aims at strengthening supervision of health managers at county/community level by public health officers and nurses going down to the facilities with a checklist of what to look out for. This is to ensure that services are of better quality.” **Save the Children Representative, Turkana, IDI**

> Initially most of the trainings were targeting provincial hospitals at the expense of the primary healthcare at the dispensary, which see most cases of diarrhoea and pneumonia. **CHAI Representative, IDI**

**d. Better understanding of modern treatment options**

The program resulting in a better understanding of modern treatment options; though more work needs to be done to scale up the use of Amoxil DT.

> “…before we capacity built our health workers on the principal of IMCI, then you would find that most cases of diarrhoea that the health workers would inappropriately use antibiotics to manage cases that do not even require antibiotic treatment… so, when we were supported to roll out IMCI to most of our facilities, that has changed and now we can confidently say that we’ve set up ORT corners and people are practicing the correct treatment options.” **Siaya County Director for Public Health, IDI.**

**Efficiencies within the Implementation of the Service Delivery Component**

It can be generally said that the program with regard to improving service delivery operated efficiently because it made use of existing structures within the community and worked with other partners that had similar programs in these areas such as KEMRI, Save the Children, PATH and CHAI. Further, the service delivery component could not have been successful if it did not involve both the national and county governments. The national government had been championing the iCCM program before the program came into existence and thus it was necessary to have their
input. Further, as the health component was devolved to the county level at the time of the project’s implementation, there was need to work with the county governments. This worked well for the different counties because the county governments were able to provide training and support to the frontline health workers. The county governments were able to replenish some of the essential medicines and provided a structure for supervision of the frontline health workers.

“…the county adopted giving them a stipend of 2,000 per month. Still not enough but our county is the only county that currently pays that stipend of 2,000 per month….” Siaya County Director for Public Health, IDI.

By adopting such an implementation approach, there are better efficiencies that were created as it avoided a scenario where there was duplication of roles. The messaging was consistently created and applied across the three counties, with slight modifications to cater for contextual issues such as literacy levels of the caregivers, but all in all, this consistency is commendable.

**Sustainability of the Service Delivery Component Established by the Program**

While the program was implemented efficiently, there are issues that needed to be checked for to encourage sustainability of this model and these are elaborated in the subsections below.

a. **Fear that attention to certain messages or interventions are not given proper attention.**

For the program to improve service delivery, it needed to ride on existing programs that were being run. One of these was the iCCM model where volunteer frontline workers were recruited, trained and supported to provide services. However, the challenge with that model is that the frontline health workers pushed a variety of messaging to the households, ranging from family planning, immunisation, birth registration as well as content on pneumonia and diarrheal disease management. While sustainable, there was fear that attention to some messages or interventions was not given proper attention and thus did not have the required effect.

“A community health worker is a community health worker for all the cases not one for diarrhoea, not another one for pneumonia you do everything, if my house belongs to you, you do everything when you come here.”UNICEF Siaya County Project Coordinator, IDI

This could be the main thing that contributed to the 36% coverage mentioned by the caregivers about the proportion of households that had ever received a frontline health worker speaking to
them about pneumonia and diarrhoea, yet on the other hand, these same frontline health workers indicated that they had done 100% mapping to identify households that had children under the age of 5 years, as well as households that had an expectant woman.

b. **Transport, Safety and Logistical Challenges for the Frontline Health Workers**

Safety issues for the frontline health workers threaten the sustainability of the service delivery component and these persons need to be provided with adequate technology to enable them cover such dangerous terrain. It was noted that they cover rocky terrain that is often infested with snakes which makes movement difficult and dangerous at night without torches.

> “Safety is also an issue especially in one of our community units. The CHVs were really complaining about one place that is rocky and the terrain is bad and it has also in infested with snakes because it is near the lake. Movement again at night is difficult when they are called to go to attend to a child at night…” UNICEF Siaya County Coordinator, IDI

They also face transport challenges and go through difficult moments to even go to their link facility for support from their CHEW.

> “… we sometimes have to meet our CHEW yet we are not being given the transport. We find it difficult commuting from place to place. We sometimes go on foot and by the time you reach you are tired. Then you also come back late in the evening and you have nothing to take with you as you go back home. You will still have to go through another headache wondering what you will cook your children for supper. So providing transport is really helpful when we were making our reports so the program could set up something for us so that during reporting time we do not go hungry. We spend a whole discussing with our CHEW and on coming back it is around three o’clock in the evening and you get home, you haven’t had lunch or anything… we are also human beings, we need to support ourselves and our families…” Homabay female CHV, IDI

Dialogue may be required to facilitate an exchange between the frontline health workers and the supporting implementing partners to ensure that a middle ground is reached. There is a perception that the frontline health workers are volunteers and therefore should not expect anything, while on the other hand, frontline health workers are feeling oppressed by the conditions that they have to volunteer in.

> “…you see they are volunteers so having that in mind when you are volunteering to do something then you must have other means of addressing your other issues but they are a bit fortunate compared to all the other volunteers in the country because they are getting stipend from the county government.” UNICEF Siaya County Coordinator, IDI

Thus, a middle ground would need to be negotiated to sustainability of this program.
c. **Challenge with Commodity and Supplies management**

There were also challenges with commodities and supplies management as the frontline health workers were only provided with a few of these essential commodities.

> “What I can say as the manager is that my greatest challenge is in commodity management. Initially, even our own health workers took a relatively long time to accept that community health workers can offer the treatment that the other health workers would offer in the facilities but we have worked around this and they have understood that the community health worker teaching ten children in the community means that we have ten children less to be treated at the hospital level...however, we need to sort out this issue of commodity management" **Siaya County Director for Public Health, IDI.**

> “It did not work well because we were not given the commodities; they were trained; they have the knowledge but no commodities. **CHA, Rarieda, IDI**

**d. Difficult referral system due to poorly equipped health facilities**

There is need to engage county governments to prioritise the construction of additional health centres closer to the caregivers to make the referral process more seamless. Further, there is need to have more frontline workers covering a manageable area without straining them.

> “For the weak link system in Turkana its addressed through restructuring with support from UNICEF, whereby they have started training from the managers then the CHEWs who included churches of health facilities so that the system works in a coordinated way. Initially in a community health unit, we used to have 50 CHVs, but in the new restructuring, it is about 10 CHVs per community health unit. A CHV should just be in-charge of one village, and a stipend has been introduced by the county government. Homabay was the first to start reducing, hence the rest of the counties are using it to benchmark.” **Officer in charge of Integrated Community Case Management at national level, Ministry of Health, Neonatal Child and Adolescent Health Unit, IDI**

Even with the construction of additional health facilities, there would be need to equip existing facilities with adequate equipment, supplies and supporting infrastructure to enable them to work longer which will ensure that referrals can happen at any time, including at night.

> “… it is an issue during the night; it is a big problem. Here we do not have lights so the hospital systems do not work at night. We have to go to Kendu Bay [which is far] and transportation at night is a major issue. You as a community health worker have to be woken up, and you have to look for means and ways to make sure that the child receives treatment.” **Homabay female CHV, IDI**
e. Poor information transfer and sharing

To obtain support and to strengthen the case with the national government for scale up, as well as steer the policy direction, it is necessary to share information with the national government but this seems to be an area where the program struggled with.

“After devolution the partners would go behind and work directly with the respective counties without giving reports at the national level; not sharing information about the counties. Hence multiple partners not at par. These same partners are faced with inadequate funds or delays in accessing funds hence translating into delays in activities and not achieving the set objectives as expected.” Programme Officer, Ministry of Health - Division of Family Health

f. Policy challenges that could affect scale up

While there were policy changes that could allow the frontline health workers to administer ORS and Zinc, the same cannot be said with regard to Amoxil DT. Noting that a pilot program was underway, it is important to analyse the results of that pilot program to identify ways of supporting scale up. All the same, and in the interim, it is necessary to explore ways of making use of health outreaches.

“For diarrhoea, the policy allows management at community level…For pneumonia, at community level is just diagnosis and then referral…there is need supporting outreaches using the beyond zero campaign approach [a campaign by the first lady of the Republic of Kenya] which will make sure children under 5 years and pregnant mothers have access to treatment.” Save the Children Representative, Turkana, IDI

g. Scale of implementation was not so wide

There is also need to scale up the implementation process to ensure that more people are covered and that the process is sustainable.

“In terms of implementation, we are not at scale; we are not at a full national coverage. Implementation at the county level is probably halfway…full implementation is maybe in Siaya and Homabay where UNICEF helped implement. Turkana is not yet fully on board” Save the Children Representative, Turkana, IDI

h. Expectation that adults will get access to treatment under iCCM.

There was also a misperception that the frontline health workers could also provide adults with treatment. It was difficult for them to convince the public as to why they are only empowered to treat children but not empowered to treat adults for the same conditions.
“I think the challenge we have had is that adults also sometimes expect to get treatment ... so then they don’t understand that iCCM focuses on the children from two months to five years. Thus, when they [frontline health workers] go to their houses they wonder why they are not being treated. It is really a challenge.” UNICEF Community Strategy Focal Person, Siaya, IDI

Additional education may be required to sensitize community members.

i. **Include guidance on the kits during training.**

It was observed that after training, additional kits were provided but which the frontline health workers were not provided with guidance on how to use them. To ensure consistency in approach, it is important to follow the kits with additional training and supervising to ensure that it happens.

“...we were given some books... I don't know how many books. We were given those books and we were not told anything about those books. I just went through some of them and they are just in my office. I have not even distributed the books because I just read through them and I do not know what to do with them. I asked even my colleague and she said that they just send those books yet we were not given any information... we were just told to come and collect these books and go and give to the CHVs.” CHA Rarieda, IDI

All these would need to be addressed to ensure that the service delivery component is sustainable. Scaling up the implementation without addressing the issues presented in this section would affect the sustainability of future programs.

**6.1.4 The Supplies Management Component**

The task under the Supplies Management component was to increase availability of essential medicines used in management of diarrhoea and pneumonia through strengthening procurement and supply chain management.

**The Need for the Implementation of the Supplies Management Component**

The project in Kenya started soon after the elections which was the timeline set for the implementation of the devolved components of government from a centralized government system. This caused some disruption in the supply chain because what was initially the role of the Kenya Medical Supplies Authority (KEMSA). Initially, KEMSA was responsible for procuring,

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3 KEMSA is a state corporation under the Ministry of Health that was established under the KEMSA Act 2013 whose mandate is:

a) Procure, warehouse and distribute drugs and medical supplies for prescribed public health programs,
warehousing and distributing drugs and medical supplies. It thus acted for a long time as the national strategic stock reserve for prescribed essential health packages and for national referral hospitals. Thus, under such a structure, it was easier to procure a product as long as the product had the support of the ministry of health. However, with devolution, and with health services being devolved, the role of the central medical stores (KEMSA and MEDS) became unclear. Thus, KEMSA needed to re-invent itself to enter into partnership with local governments with the purpose of providing the services of procurement, warehousing and distribution of drugs and medical supplies. That notwithstanding, county governments are free to choose any other supplier and are not mandated to procure with KEMSA.

In such an environment, it has been difficult to advocate for the procurements of the same essential supplies as the different county governments choose their own procurement direction. Thus, a lot of advocacy work was required with the various county governments.

The situation has now mostly stabilized as a result of the advocacy efforts and there is general agreement that KEMSA and MEDS will remain the primary sources of medical supplies, with some modifications to suit specific county demands.

**Supplies Management Activities Implemented Under the Program**

Various activities were implemented under the supplies management component. First was the drive towards the deregulation of ORS and Zinc that was pushed by various partners including CHAI, PATH, and USAID/MCHIP. Further, was the drive towards introducing an ORS/Zinc co-pack and making it locally available at the community level; and this was done in close partnership with CHAI for which, a long term agreement exists.

b) Act as the national strategic stock reserve, prescribed essential health packages and national referral hospitals.

c) Establish a network of storage, packaging and distribution facilities for the provision of drugs and medical supplies to health institutions.

d) Enter into partnership with or establish frameworks with local governments for purposes of providing services in procurement, warehousing, distribution of drugs and medical supplies.

e) Collect information and provide regular reports to the national and county governments on the status and cost effectiveness of procurement, the distribution and value of prescribed essential medical supplies delivered to health facilities, stock status and on any other aspects of supply system status and performance which may be required by stakeholders.

f) Support County Governments to establish and maintain appropriate supply chain systems for drugs and medical supplies
Further, and with regard to pneumonia disease control, UNICEF was involved in the procurement of key supplies including Amoxil DT in Homa Bay to minimise stock outs that were being experienced. It was also necessary to review the essential medicines list to reflect Amoxil DT and activities toward this were led together with PATH and KPA.

That was not all. It was also necessary to develop a web based commodity monitoring platform accessible through a mobile phone and this was implemented in Homa Bay, in addition to having commodity management meeting at sub-county level to help track supplies status. In Siaya, alternative community based health information systems were being explored to ensure commodity security.

“…we are exploring ways of improving community based health information system because it is in this way that we can address the issues of commodity security. We have a mode of reporting that we can track commodities right from the time when we get them into the county to the child that benefited from that. Using it, we are able to show that these 1,000 ORS were given to this 1,000 children, which makes it easy for us to convince those that give us money that yes, the money went to good use.” Siaya County Director for Public Health, IDI.

In the same area, social media platforms were used to manage redistribution of products in the county where there were excesses to areas where stock outs had been experienced.

Finally, it was necessary to provide an environment where the co-packed ORS and Zinc was made available. It is worth noting that Kenya has a solid local manufacturer base and UNICEF needed to provide technical assistance to two ORS/Zinc Co-pack suppliers (Universal and Cosmos) to enable them achieve global manufacturing standards. It emerged from various reports that Universal Manufacturers has already been approved and Cosmos was expected to follow shortly. Their approval is now expected to increase the availability of the product in the entire East Africa region.

**Effectiveness of the Supplies Management Activities**

There are instances when supplies were available in the health facilities and with the frontline health workers, and there are also other instances in which stock outs were experienced.

From the caregivers’ perspective, it emerged that about a third have experienced drug stock outs for both ORS and Zinc. This is especially pronounced in Turkana County for both ORS and Zinc.
Thus, most of the people have to travel extremely long distances to acquire the product. The same applied to the ORS/Zinc co-pack where the same issues were mentioned as recurrent issues.

About 15% of the caregivers have tried purchasing or acquiring ORS and it was not available; this happened within the last three years for most of these caregivers.
The stock out was most felt in public health facility and this was more pronounced in Turkana and Homa Bay counties.

The caregivers experienced the ORS stock outs about once in the last one year and around 51% of these noted that the situation has improved from what it was in the previous year.
With Zinc on the other hand, a similar trend was observed where 12% of the caregivers mentioned that they tried purchasing it and it was not available. This happened for more than half of the caregivers within the last six months.

This stock out for zinc was experienced for 67% of the caregivers in public health facilities and more so in Turkana county.
This stock out for zinc was experienced about once for 52% of the caregivers; though it is worth nothing that in Turkana county, 22% of the caregivers experienced this stock out more than 5 times.

All the same, the situation on the availability of zinc improved in the last one year.
With regard to the ORS/Zinc co-pack, it is apparent that 92% of the caregivers have never tried purchasing the product. This could be attributed to the fact that the product is not readily available. As shown below, about 4% of the caregivers reported that they had ever tried purchasing the product and it was not available.

Caregivers who reported that they had tried to purchase the product and it was not available indicated that they had done so within the last three months preceding the data collection period. Additionally, these caregivers reported that they had experienced this stock-out at a public health facility as shown below.

Even then, this scarcity was experienced once by those who could not find the product [ORS/Zinc co-pack] when they required it. There was consensus that there had been improvements in the availability of the ORS/Zinc co-pack in the last one year.
With regard to pneumonia, 25% of the caregivers that have faced challenges acquiring Amoxicillin noted that the drugs were not readily available.

A similar proportion of caregivers (21%) mentioned that they have tried purchasing or acquiring Amoxil and it was not available.
Attempts were made to acquire or purchase Amoxil at a public health facility and it was not available. This was mentioned by 48% of the caregivers. However, it is worth noting that scarcity on Amoxil was equally experienced in local pharmacies and drug stores as mentioned by 42% of the caregivers.

Most of these instances happened in the last two years, though, there were arguments that the situation had improved in some areas and stayed the same in others. For instance, the situation improved for 52% of the caregivers in Homa Bay while 42% of the caregiver in Turkana mentioned that the situation had remained the same, while on the other hand, there was a tie between the proportion of caregivers that said that the situation had improved and those that said that it had remained the same.

All these go to show that there is a lot of work that remains to ensure that these essential medicines are available at the local level – closer to the caregivers.
**Efficiencies Observed with the Supplies Management Activities**

A couple of efficiencies were observed in the supplies management activities. First, was the attempt to streamline supplies management through KEMSA even with its threatened position following devolution in Kenya where county governments were in charge of their own procurement and it was not necessary for them to procure through KEMSA. It was commendable to observe that KEMSA was able to find its relevance by shifting its focus from providing support to the national governments to providing support to the county governments.

“In the county, the pharmacist issues a notice that we need to procure a certain quantity or certain types of commodities. This is then given to the chief officer who forwards to director of supply cheque. Quotations are given out but normally; if we’re buying from KEMSA then an LPO is just generated and sent to KEMSA and then KEMSA would supply; after the supply and we’ve received the delivery notes and the invoice, then payment would be done…in case we’re not buying a certain commodity from KEMSA then after the notice to procure has been generated and this is sent to the director of supply chain management, quotations are sent out to the prequalified firms who would then submit their bids and whoever is the lowest then would be picked to supply and payment would be done as we get the delivery notes and the invoices…these procurement systems are the same for essential medicines…now under this programme we had two pipelines. The partner (UNICEF) is still supporting us on getting some essential medicines, so, if we’re receiving from the partner then we would declare to the partner that we’re having a shortage of 1, 2, 3 and then the partner would clarify the quantities that we need and if at all they have the same, they would directly supply us with that but if they didn’t and we needed to buy from either KEMSA or the other private vendors then the same procedure would apply for all essential medicine.” *Siaya County Director for Public Health, IDI.*

Using such existing structures, the program was able to focus on other supplies management activities that were required, such as the procurement of Amoxil DT in Homa Bay to minimise stock outs that were being experienced in addition to pushing for the review of the essential medicines list to reflect Amoxil DT in close collaboration with PATH and KPA.

In addition to that, the program was able to participate in the deregulation of ORS and Zinc in close collaboration with CHAI, PATH, and USAID/MCHIP. As noted earlier, the program was able towards introducing an ORS/Zinc co-pack and making it locally available at the community level; and this was done in close partnership with CHAI for which, a long term agreement exists.

Further, it was necessary to provide an environment where the co-packed ORS and Zinc was made available. It is worth noting that Kenya has a solid local manufacturer base and UNICEF needed to provide technical assistance to two ORS/Zinc Co-pack suppliers (Universal and Cosmos) to enable them achieve global manufacturing standards. It emerged from various
reports that Universal Manufacturers had already been approved and Cosmos was expected to follow shortly. Their approval is now expected to increase the availability of the product in the entire East Africa region.

All these point to a high level of efficiency and collaboration in the way the supplies management component was implemented, however, the program seemed to suffer from issues of supplies and commodity tracking and monitoring. As observed earlier, caregivers were noted as having experienced stock outs for either ORS, Zinc or the ORS/Zinc stock outs. The same information was mentioned by the frontline health workers that mentioned that they were not stocked with adequate supplies. There exist weak ledger management systems at all levels of service provision, which affect the level of forecasting. Thus, responses to supply issues are delayed and further plagued by inadequate financing at the counties. The program tried to develop a web based commodity monitoring platform accessible through a mobile phone and this was implemented in Homa Bay, and this was tracked in commodity management meetings at sub-county level to help track supplies status. In Siaya county, social media platforms were used to manage redistribution of products within the county; where there were excesses, the platform enabled the redistribution of these products to areas where stock outs had been experienced.

Overall, it appears that additional work may be required to strengthen this ledger management system but for that to happen, there needs to be some coordinated effort and sharing of information between the national government and the county governments. A joint national and county working group was proposed to facilitate better record keeping, multi-year forecasting as well as to support the standardisation of tools used for managing these records.

Another area where the program may not have worked efficiently was where it was not able to anticipate how much loose ORS and Zinc was available in the counties from other previous programs and initiatives while pushing for new products. It appears that there were loose ORS and Zinc that were in existence in the counties and which were at risk of wastage if the co-packed one had been procured immediately.

“It was a balancing act. We had loose ORS, loose Zinc…it had to be mopped up under a challenging supply chain…if you bring a co-pack when these are there, they will expire. So the decision to order was timed when existing products had been finished…so that’s why we had loose products until I think around 2015…it was necessary not to rush the co-pack when we have these loose ones.” *Siaya County Director for Public Health, IDI.*
It thus might have been better to choose a system that fit into existing solutions while trying to drive change.

**Sustainability of the Supplies Management Activities**

This was one of the components in which a greater degree of collaboration was observed between various state agencies, local government agencies as well as other development partners. This component also involved the participation of private drug manufacturers who were required to fill in the demand that had been created at community level. However, for this to work and remain sustainable, a few things would be required.

**a. Standardisation on the Presentation of ORS and Zinc**

There is need to garner support across the various players for a standardised kit for ORS/Zinc co-pack. This standardisation process would need to involve all players from the manufacturers to the points of sale or points of acquisition for the caregivers. By agreeing that the manufacturers and distributors avail a co-packed version of the product, this will enhance compliance with difference persons including private pharmacies and drug stores that were reported as selling ORS without zinc.

“.... Yes, I would say somehow; a number of such outlets now co-pack and that is what they now try to push to people that are coming to buy ORS. But as I mentioned earlier on, the challenges of purchasing power of the consumer and the insistence that they need ORS without Zinc, becomes a challenge...however, the practice is changing towards co-packing... with the co-packing, there are better outcomes ... co-packing reduces the duration and severity of diarrhoea... zinc unfortunately, was not previously recognized as having a very good impact in the outcome of diarrhoea but now that we are doing the co-packaging, then that has increased the demand.” Siaya County Director for Public Health, IDI.

**b. Improved Ledger Management Systems**

An issue with stock outs of these essential supplies was observed.

“on the supplies...they are not really enough. Because on the ground we as the CHVs are not receiving them frequently, we sometimes go as far as referring patients to the clinics if we don’t have them, I can say I had them just when I was given when we had gone for that session but my colleagues some don’t have them so they are always telling me I don’t have this I don’t have that for me when I don’t have them I call the ICCM team, my CHEW first to let him know that we are lacking such and such... So he [supervisor] can organize for us and we can get the drugs and we have always received them but down the line, we have not been having enough drugs for us to use on the ground ... I can say from some time last year we have gone for a period of time without having the Amoxicillin syrup but we had the ORS and then you can get the ORS and the zinc but there is no syrup, so it is just like that sometimes we have them sometimes we
don’t… No it is from last year around July going to August, from there we could not get enough Amoxicillin syrup… I informed the CHEW and it took about three months and then we received three bottles each of us but you know at the ground as per the age, one child consumes two bottles so having three bottles that is really, we are going to treat only two babies and that will be gone… It took three months to get the three bottles after which we were given again in January some two bottles.” *Homabay female CHV, IDI*

We explored with the counties as to what could be causing these stock outs and the main issue observed was poor ledger management as well as the erratic nature of county funding which makes it difficult to procure commodities and supplement what has been provided by other partners.

“The challenge became how we account for commodities and also the erratic nature of the county funding that makes it difficult for us to adequately procure commodities and supplement what the partner has given us.” *Siaya County Director for Public Health, IDI.*

Further, there is the issue of sufficient budget allocation by county governments for medical supplies.

“We are doing a lot of advocacy; we are doing a lot of advocacy particularly to the county government so that we increase the allocation for commodities for medical supplies…” *Siaya County Director for Public Health, IDI.*

The stock outs were also observed to have been occurring from gaps at KEMSA that does most of the procurement. It was reported that sometimes they do not have those essential commodities and the search for alternative sources is what causes delays in their replenishing of these supplies.

*For us now there are two ways [in which we obtain these supplies] …UNICEF which is supporting the program has their own procurement system which they give to us through the sub county stores where the community worker can access them. The other is an arrangement with the ministry of health where there was arrangement that was made with KEMSA where sub counties submit their list of requirement medication directly to KEMSA and then KEMSA delivers medication to each facility up to the last dispensary in any remote area. They then give us the invoice to pay for this…even with KEMSA sometimes they do not have the commodities so we are forced to find out who else can supply that on the side “Chief Officer of Health in Homabay County*

UNICEF was observed as heavily filling the gaps in supplies provision in those instances that the same were not available at the counties.

“…in terms of stock outs it depended… with our partner[UNICEF] it has been very smooth; it has been so smooth that they would even get from us from another county if they have extra stock. With the county channels, we experienced stock outs… At the county level, it may take a very long time; there are certain times when we’ve had stock outs of specific commodities for as long as three months… During the program implementation, we were using commodities supplied by our partner UNICEF so, largely; we did not have stock outs.” *Siaya County Director for Public Health, IDI.*
This needs to be given priority to ensure that all the results of the other activities implemented under the program are sustained.

“…without supplies people get frustrated. The health workers are trained but if there are no supplies, it’s frustrating… if you create a demand there has to be supply, otherwise people get frustrated, they may go back to where they were…that is the dark side…” Chief Officer of Health in Homabay County

As noted earlier, there is need for a joint national and county working group was proposed to facilitate better record keeping, multi-year forecasting as well as to support the standardisation of tools used for managing these records. Already, CHAI and MSH were mentioned as having taken up the responsibility to strengthen the ledger management information system but there is need to strengthen partnership between the counties and KEMSA for efficient supplies provision.

**c. Policy standardisation need for the prescription of Amoxil DT by the frontline health workers.**

There are pending policy issues that need to be resolved as regards the prescription of Amoxil DT by the frontline health workers at home especially with the challenges being experienced by the distance that caregivers need to commute to access health facilities.

“Because it’s a policy issue, up to now the Kenya government has not allowed CHW to give DT or to give any antibiotic at the community. So that is why a pilot is being done in Homa Bay to see whether they can do it well prescribing the product, and if it works, there is a chance that the same will be scaled up” UNICEF Siaya County Project Coordinator, IDI.

There are however some reservations among some partners about whether it would be prudent to provide frontline health workers with antibiotics.

“…There are risks associated with keeping antibiotics at home in terms of temperature…what happens when a CHV does not have the knowledge and right equipment to store those drugs.” Save the Children Representative, Turkana, IDI

An evaluation of the same needs to be done to ensure that the program does not end up creating another issue in an attempt to solve another one.
6.1.5 Public-Private Partnership Activities

The intention of the activities under the Public-Private Partnership Activities was to strengthen public-private partnerships and make better use of private sector channels for appropriate diarrhoea and pneumonia treatment.

The Need for Public-Private Partnership Activities in Kenya

During the first year of the project, Kenya’s principal PPP goal was to increase the availability of, and demand for, a co-packaged ORS-zinc product. Subsequently, it was necessary to provide the ground on which key supportive policy changes could be implemented as necessary.

Public-Private Partnership Initiatives Implemented in Kenya

First, partnerships were formed with various players and certain tasks were assigned to them. There were partners as seen that were tasked with running a communication campaign in various target regions.

“PSK and CHAI came together and run a nationwide communication campaign for a period of six months through radio in 15 languages: in Kiswahili and 14 of them being in local languages. For CHAI they got 10 counties to run these messages on a regular basis on their local stations in vernacular and have teams go communicate to the community about the dangers of diarrhoea mainly. Also specific to CHAI in 13 counties, there was the use of the Inter Religious Council of Kenya (IRCK) to reach out to the caregivers through the religious platform…We also used print media where posters were distributed in health facilities…interpersonal level of communication: in the counties, health workers scheduled meeting to address common childhood illnesses: malaria, diarrhoea and pneumonia…In some counties there are community health units with community health workers going out to educate the masses.” CHAI Representative, IDI

First, it appears that there was a technical working group at national level for the program, while others were tasked with running a media campaign, yet others, were tasked with preparing health tool kits for maternal and child health, while others looked at ensuring product availability, co-packaging and distribution.

“There is a technical working group at the national level, we come together to work on the objectives when sending out tenders to awarding and once that is done, partners commit money in terms of who is going to support what in the campaign… PSK, CHAI, PATH…PSK and CHAI financed the funding for the media campaign for six months, CHAI implemented the treatment part…, CHAI worked with the ministry to put together a health tool kit that will be used to support treatment. It was in print and in motion pictures that the facility can put on the screens they have. The health tool kit is a maternal health and child health tool kit that covers issues around the mother and new-borns. In terms of commodities as CHAI we have commodity available to everyone both public and private sector. Initially the ORS and zinc were available separately…Facilities would order for ORS but not in matching quantities with zinc, and there was no...
knowledge on administration of zinc and most of it would expire…CHAI made a commitment that by the
time the program came to an end that we had a co-packed product in the market that contains 4 sachets
of ORS and 10 tablets of zinc available in one pack. To begin this process, drug manufacturers were
approached to be in co-packing the product without increasing the price but ensuring they availed the co-
packed product in the market and as a result we are increasing demand for this product and marketing for
the drug manufacturers…Co-pack was made available in the market in 2013 at a reduced cost: the
equivalent was previously going for Kes 200 and later reduced to Kes 50…PSK took the prevention
part…Some county government have taken up implementing this program so that the message is
continuously reinforced. PATH helped implement the program in parts of Nyanza and Western since before
2011. They are big on advocacy in diarrhoea.” CHAI Representative, IDI

As mentioned above, two local companies, Universal and Cosmos, had been producing small
quantities of the product, and UNICEF provided technical support to both companies to adjust
their facilities to meet global standards. Having two private drug manufacturers producing the
co-pack was expected to increase the availability of the product in the entire East Africa region,
and the competition between the two companies was expected to keep the prices at a
reasonable level.

Further, UNICEF worked with the County Health Teams and CHAI to manually bundle existing
ORS and Zinc for distribution at all health facilities in the target counties. It does appear however
that this manual bundling took place at national level and not county level as explained in the
narrative below.

“It was a balancing act. We had loose ORS, loose Zinc…it had to be mopped up under a challenging supply
chain…if you bring a co-pack when these are there, they will expire. So the decision to order was timed
when existing products had been finished…so that’s why we had loose products until I think around 2015…it
was necessary not to rush the co-pack when we have these loose ones.” Siaya County Director for Public
Health, IDI.

This means that a significant proportion of loose packs were still in circulation even in the link
facilities that frontline health workers were expected to draw their support from. It was reported
further that UNICEF was working with the three County Health Management Teams CHMTs,
Save the Children, KEMRI and other partners to map private facilities and distribution points.
There were efforts first to engage the ministry of health and KEMSA to stock the ORS/Zinc Co-
pack.

In 2014, we worked with the Ministry and KEMSA to begin stocking the combined ORS/Zinc product in
preparation to the procurement that was coming up in 2015. In 2014 working in conjunction with Director
Medical Services we got a recommendation to go to KEMSA to recommend procurement of the co-pack at
the same time got a recommendation from the DMS to go to the counties for them to purchase the co-
packed product at the policy level…CHAI Representative, IDI
Then there were partnerships with private chemists and drug shops in the three counties to sensitize private sector providers about the essential medicines and with focus on ORS/Zinc bundling. This effort to scale this up needed to be followed up because it appears that there were challenges monitoring compliance by these private health facilities.

“I want to believe that even those who go directly to a private chemist would also get appropriate treatment… The bit that we cannot control is what they stock or how they dispense. We try as much as possible as the government to monitor and influence what they do, but we cannot say with confidence that they stick to what should be done… Apart from having frequent meetings with them, we have also encouraged them to come together as the private practitioners to come together so that we should be dealing with the umbrella body so that apart from the regulation from our part, the issues of self-regulation would also strengthen that practice…. Yes, I would say somehow; a number of such outlets now co-pack and that is what they now try to push to people that are coming to buy ORS. But as I mentioned earlier on, the challenges of purchasing power of the consumer and the insistence that they need ORS without Zinc, becomes a challenge…however, the practice is changing towards co-packing…. with the co-packing, there are better outcomes … co-packing reduces the duration and severity of diarrhoea…. zinc unfortunately, was not previously recognized as having a very good impact in the outcome of diarrhoea but now that we are doing the co-packaging, then that has increased the demand.” Siaya County Director for Public Health, IDI.

This problem can to an extent be solved in the future by having programs that ensure complete bundling of ORS and Zinc so that no loose products exist in the market. Concerning Pneumonia, it appears that the program did not have many partnerships to increase their availability as it was mentioned that UNICEF continued to procure these to minimize stock outs that were being experienced in Homa Bay where a pilot program was being implemented. Further, there were partnerships to support iCCM in some counties such as Turkana that worked together with the county governments to generate demand and to improve service delivery.

We had different levels of program implementers. The first level is the Save the children staff who were directly responsible for daily activity implementation. Then we have the level of the county government – the county health management team who were the custodians of the health system in Turkana, hence they were direct program implementers. We have the health workers at the facility and then we have the CHVs. Among the key approaches used is training provided at different levels to the health workers and the CHVs. The members of the county health management team were also taken for an exchange program to Nyanza to learn about iCCM, which resulted in capacity building. Other approaches used was mentorship, program review meetings for staff and quite a number of program reviews where staff were brought together to go through the progress, lessons learnt and the challenges of this project. On several occasions, there has been technical mentorship from the UNICEF staff in terms of sharing information, actual meetings, presentations, program reviews at field levels where there is a lot of exchange of notes. Through the training, the coordination meeting where we have technical working groups, county and sub-county health management team. These were learning forums where the county and sub-county government would share the progress of their programs. Save the Children Representative, Turkana, IDI

The only partnership mentioned with regard to Amoxil DT was the collaboration with PATH and KPA to review the essential medicines list to contain this product.
Effectiveness of the Public-Private Partnerships Implemented

The public private partnerships helped achieve a number of things. First, an ORS/Zinc co-pack became available due to the collaboration efforts with CHAI and it was observed that these became available in the local areas. However, there is need to scale up these efforts because it was observed that 4% of the caregivers have ever tried purchasing or acquiring the ORS/Zinc co-pack and it was not available and that this happened even when the program was being implemented.

While this figure (4%) looks minimal, it is worth noting that approximately 92% have never tried purchasing or acquiring the co-pack, which goes to show that additional demand generation activities may be required to go hand in hand with improving supplies. About 15% are aware of the ORS/Zinc co-pack and this is one area that the program can focus on in the future because it appears that awareness tends to drive its usage.
The few caregivers that are aware of it recognize that children respond faster to treatment but have issues with its availability.

Another achievement realised in the public private partnership activities was the training of 82 private chemists and local shops to deliver iCCM in Siaya. However as mentioned earlier, it was difficult to monitor whether private chemists and local shops are selling ORS and Zinc together because it emerged that there are chances that these were being sold separately due to consumer demand issues where caregivers come and demand to be sold to one product without the others due to pricing. That however was not a problem that affected private facilities only but also affected public health facilities as well in the initial stages.

“Initially the ORS and zinc were available separately…Facilities would order for ORS but not in matching quantities with zinc, and there was no knowledge on administration of zinc and most of it would expire…” CHAI Representative, IDI

**Efficiency of the Public Private Partnership Initiatives**

As noted earlier, the public private partnership initiatives were well structured and helped to achieve certain results. One challenge though is that it was felt that coordination for these initiatives could have been done more frequently and in a more structured manner.
At coordination, it could have been done more frequently, probably monthly which helps keep the county health management to be more engaged in program supervision. Bringing on board the sub-county management and holding meetings quarterly would add more value on what we did because of staff turnover – those leaving and those coming in. For dialogue days, it would have been better if community units put their plan, which fits to the facility annual work plan, which would then be easy to monitor and track progress. **Save the Children Representative, Turkana, IDI**

That the implementers stop having disintegrated support of the program but instead focus on more than one component… the challenge is that the partners are not funded enough for the comprehensive approach. **CHAI Representative, IDI**

**Sustainability of the Public Private Partnership Initiatives Implemented**

Various partners were involved, each who funded a portion of their component. This means that some of the activities would be able to continue and are continuing in the future. A few challenges were observed however, that are likely to affect the program’s sustainability.

**a. High attrition of providers in the private sector**

This problem was more pronounced in the rural areas. Private partners were trained but with the high attrition rates, this affected the results that could be achieved as a result. One key question that lingers is whether the frontline health workers could be utilised to sustain engagement with the private sectors for continuity and to sustain the results expected.

**b. Need to mop out loose products and encourage bundling at local level to improve compliance**

It was difficult to monitor whether private chemists and local shops are selling ORS and Zinc together because it emerged that there are chances that these were being sold seperately due to consumer demand issues where caregivers come and demand to be sold to one product without the other due to pricing. That however was not a problem that affected private facilities only but also affected public health facilities as well in the initial stages. There is need to continue with efforts to encourage local bundling of ORS and Zinc.
6.2 Focus on Tanzania

In Tanzania and according to the Tanzania Demographic Health Survey (TDHS) of 2010, children under the age of 5 years make up about 17% of the entire population (46 million people). Tanzania is reported to have made considerable progress in the reduction of child mortality for the under-fives (declined by 41% from 137 deaths per 1,000 live births in 1992-1996 to 81 deaths per 1,000 live births in 2006-2010). In addition to that, out of the 60 high burden countries (at least 40 deaths per 1,000 births) in 2013, Tanzania was among the few countries reported to have made great strides in reducing under-five mortality rates by two-thirds or more since 1990\(^4\). This notwithstanding, Acute Respiratory Infections (ARI) (with pneumonia being reported as having the highest prevalence) and diarrhoea continue to be reported as the leading causes of child morbidity and mortality in Tanzania (TDH2010). Over the years, a number of policies and programs have been put in place in Tanzania to aid in the reduction of child morbidity and mortality because of diarrhoea and pneumonia. These have included the introduction of the Integrated Management of Childhood Illness in 1996, the introduction of zinc as diarrhoea treatment in 2009, incorporation of haemophilus influenza type b (Hib) vaccine into the routine immunization program in 2009, the revision of the guideline to place Amoxicillin as the first line medicine in pneumonia treatment in 2010 and the incorporation of Pneumococcal Conjugate Vaccine (PVC) for pneumonia and Rotavirus for diarrhoea into the routine immunization program in 2013. Despite these efforts having been made however, gaps still existed towards the achievement of results from these interventions with reports as recent as 2011 from the Ministry of Health and Social Welfare (MoHSW) indicating that diarrhoea and pneumonia were ranked among the top three causes of deaths among children under the age of five in the country.

The Diarrhoea and Pneumonia Treatment Initiative Program in Tanzania was implemented in 2013 in response to the current situation with the overall objective of contributing towards the reduction of child morbidity and mortality through increased demand for and reliable supply of effective treatment for diarrhoea and pneumonia in Tanzania. The program was implemented selected areas of Tanzania; in Mbeya, Iringa and Njombe regions (Mbeya Municipality, Mbeya

District Council, Makete District Council, Njombe District Council, Iringa District Council and Mufindi District Council), which were considered to be some of the regions with a high burden of diarrhoea and pneumonia cases and therefore viable for intervention. As shown in the table below however and according to findings from the TDHS 2010, other areas appear to have had a higher burden of ARIs (such as Kilimanjaro and Ugunja North) and diarrhoea (such as Kigoma and Kagera) as compared to the selected project areas.

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage with symptoms of ARI</th>
<th>Number of children</th>
<th>Percentage with symptoms of diarrhoea (including diarrhoea with blood)</th>
<th>Number of children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dodoma</td>
<td>5.5</td>
<td>442</td>
<td>21.8</td>
<td>442</td>
</tr>
<tr>
<td>Arusha</td>
<td>4.8</td>
<td>285</td>
<td>12.6</td>
<td>285</td>
</tr>
<tr>
<td>Kilimanjaro</td>
<td>10.1</td>
<td>185</td>
<td>16.0</td>
<td>185</td>
</tr>
<tr>
<td>Tanga</td>
<td>4.2</td>
<td>319</td>
<td>11.0</td>
<td>319</td>
</tr>
<tr>
<td>Morogoro</td>
<td>6.0</td>
<td>329</td>
<td>15.8</td>
<td>329</td>
</tr>
<tr>
<td>Pwani</td>
<td>4.9</td>
<td>196</td>
<td>5.6</td>
<td>196</td>
</tr>
<tr>
<td>Dar es Salaam</td>
<td>8.0</td>
<td>366</td>
<td>15.5</td>
<td>366</td>
</tr>
<tr>
<td>Lindi</td>
<td>3.4</td>
<td>140</td>
<td>19.2</td>
<td>140</td>
</tr>
<tr>
<td>Mtwara</td>
<td>4.3</td>
<td>225</td>
<td>13.7</td>
<td>225</td>
</tr>
<tr>
<td>Ruvuma</td>
<td>4.1</td>
<td>240</td>
<td>9.7</td>
<td>240</td>
</tr>
<tr>
<td>Iringa5</td>
<td>3.1</td>
<td>296</td>
<td>15.3</td>
<td>296</td>
</tr>
<tr>
<td>Mbeya</td>
<td>3.0</td>
<td>484</td>
<td>17.6</td>
<td>484</td>
</tr>
<tr>
<td>Singida</td>
<td>2.4</td>
<td>289</td>
<td>15.9</td>
<td>289</td>
</tr>
<tr>
<td>Tabora</td>
<td>1.3</td>
<td>427</td>
<td>10.0</td>
<td>427</td>
</tr>
<tr>
<td>Rukwa</td>
<td>3.3</td>
<td>271</td>
<td>10.4</td>
<td>271</td>
</tr>
<tr>
<td>Kigoma</td>
<td>8.1</td>
<td>399</td>
<td>28.8</td>
<td>399</td>
</tr>
<tr>
<td>Shinyanga</td>
<td>0.6</td>
<td>792</td>
<td>3.6</td>
<td>792</td>
</tr>
<tr>
<td>Kagera</td>
<td>8.3</td>
<td>478</td>
<td>24.0</td>
<td>478</td>
</tr>
<tr>
<td>Mwanza</td>
<td>3.2</td>
<td>747</td>
<td>13.7</td>
<td>747</td>
</tr>
<tr>
<td>Mara</td>
<td>4.4</td>
<td>357</td>
<td>17.7</td>
<td>357</td>
</tr>
<tr>
<td>Manyara</td>
<td>2.0</td>
<td>194</td>
<td>8.8</td>
<td>194</td>
</tr>
<tr>
<td>Unguja North</td>
<td>9.3</td>
<td>33</td>
<td>17.6</td>
<td>33</td>
</tr>
<tr>
<td>Unguja South</td>
<td>1.4</td>
<td>17</td>
<td>10.4</td>
<td>17</td>
</tr>
<tr>
<td>Town West</td>
<td>7.9</td>
<td>71</td>
<td>6.9</td>
<td>71</td>
</tr>
<tr>
<td>Pemba North</td>
<td>7.7</td>
<td>43</td>
<td>8.8</td>
<td>43</td>
</tr>
<tr>
<td>Pemba South</td>
<td>3.6</td>
<td>42</td>
<td>16.6</td>
<td>42</td>
</tr>
</tbody>
</table>

Table 1: Number of children reported to have ARI infections and diarrhoea, TDHS 2010

From findings of the evaluation however, it was noted that the programming in Tanzania was done as part of wider multi-sectored interventions planned by UNICEF. In this program, there were two groups of interventions with different geographical coverage. Three key interventions were targeted at the national level whilst all others were implemented in regions and districts targeted for UNICEF support in the UNDAP (described below). The implemented program therefore addressed other health sector interventions- such as water and sanitation, education.

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5Njombe was established in 2012 as an administrative region after being split off from Iringa region. Figures for Iringa therefore contain Njombe as TDHS 2010 was carried out prior to this split.
and other social support provision in addition to diarrhoea and pneumonia. The objective for this was to make it more integrated and comprehensive.

## 6.2.1 Current Programming in Tanzania

As indicated previously, a formative research study was carried in Tanzania prior to the implementation of the Diarrhoea and Pneumonia Treatment Initiative in the country. Findings from this study informed the implementation process of the program. The program in Tanzania had a wider scope and included other health interventions in addition to diarrhoea and pneumonia. National interventions included the following.

- a) Facilitating registration of the products and procurement for countrywide distribution. This also covered quantification and forecasting.
- b) Advocacy with professional associations, private sector and faith based organizations for the use of essential commodities - Zinc/ORS and Amoxicillin DT.
- c) Behavior change communication using radio and other mass media and the national dissemination of the program.

In addition to that, selected program regions contained UNICEF supported districts that were selected for sub national focus where multi-sectored coverage was planned. Interventions targeted at sub national level included demand creation and capacity building which were in the six UNICEF supported districts in the three regions of Mbeya, Iringa and Njombe (Mbaleri District Council, Mbeya District Council, Makete District Council, Njombe District Council, Iringa District Council and Mufindi District Council). UNICEF identified these six districts as the sub national focus, where multi-sectored converging support was planned. In this case, while this program addressed the health sector interventions, there were also water and sanitation, education and other social support components provided to make it a comprehensive approach. The external evaluation carried out however focused on the impact of interventions specifically focused on contributing towards the reduction of child morbidity and mortality through increased demand for and reliable supply of effective treatment for diarrhoea and pneumonia in the targeted project areas. The program concentrating on the following.

- a) Demand generation
- b) Service Delivery
- c) Supply Management
d) Public-Private Partnerships

Each of these items was evaluated and is presented in this report based on OECD guidelines of relevance, effectiveness, efficiency and sustainability as narrated in the subsections below.

6.2.2 Demand Generation – Communication for Development

Demand generation was targeted at key stakeholders in the health sector as well as the caregivers of children under 5 years and their families.

The Need for the Demand Generation Activities

Care seeking behaviour was identified as one of the leading barriers in the reduction of child morbidity and mortality in Tanzania with studies continuing to show that care seeking for sick children needs to be improved. According to the findings from the Tanzania Demographic Health Survey (2004/05), among children with symptoms of Acute Respiratory Infection (ARI) and diarrhoea prior to the survey, [only] half of the children (57%) with symptoms of ARI or fever and less than half (47%) of children with diarrhoea were taken to a health facility. In Tanzania, although access to health services is good, many people seek care when it is too late or not at all. It is against this background, a formative study was carried out by UNICEF in 2013 whose key objective was to identify and analyse the influencers, enhancers and constraints related to care seeking behaviour in the treatment and prevention of diarrhoea and pneumonia among children under five as well as determine the supply side constraints among service providers in the treatment and prevention of diarrhoea and pneumonia among children under five. Against this background, a formative study was carried out by UNICEF in 2013 whose key objective was to identify and analyse the influencers, enhancers and constraints related to care seeking behaviour in the treatment and prevention of diarrhoea and pneumonia among children under five as well as determine the supply side constraints among service providers in the treatment and prevention of diarrhoea and pneumonia among children under five. Findings from the formative research were used to inform the Diarrhoea and Pneumonia Treatment Initiative in Tanzania. Findings from the formative research that were deemed to affect demand for care seeking behaviour were found to be economic affordability, breath/ range of services,

http://www.who.int/pmnh/countries/tanzania/ mapstrategic.pdf
competence/expertise of staff, accessibility, affinity and longer service hours. These findings were used to inform the design and implementation process of the Improving Treatment of Childhood Diarrhoea and Pneumonia program in Tanzania in 2013. The demand generation aspects of the program had the following expected results.

a) To make certain that professional associations and community leaders advocate for pneumonia and diarrhoea
b) To have caregivers exposed to national awareness campaigns on pneumonia and diarrhoea
c) To ensure that caregivers are exposed to behaviour change communication by frontline providers and local partners about the dangers and signs of and appropriate treatment for diarrhoea and pneumonia
d) To have strategies prioritized to reduce non-financial and financial barriers to treatment identified by caregivers

**Demand Generation Activities Implemented Under the Program**

A number of activities were therefore developed and implemented in order to achieve the planned results which began with the development of a communication plan using a multi-sectored approach (with representation from key sectors including the Ministry of Health, intervention district councils, professional associations, faith based organizations, as well as representation from other key stakeholders and development partners). Activities carried out included launching a national event aimed at securing a conducive policy for strengthening services for prevention and treatment services for diarrhoea and pneumonia for children under the age of five (targeting policy makers and the general public), advocacy sessions with members of parliament’s social service committee, advocacy sessions with local government authorities in the three focus regions (targeting key decision makers), as well as advocacy sessions with professional associations (Paediatric Association and Association of Private Health Facilities). In addition to that, a communication plan was also developed for social mobilization and behaviour change, which was aimed at raising community awareness, encouraging dialogue and participation as well as creating demand for preventive and treatment services provided for pneumonia and diarrhoea. Key activities carried out under this communication plan included the production of multi-media materials for mass media communication for (TV and radio programming, “push sms” activities where members of the
public received short messages on diarrhoea and pneumonia prevention and treatment and
distribution of posters and fliers with messaging on diarrhoea and pneumonia management) as
well as door to door educative visits by community health workers targeting pregnant mothers
and mothers with children under the age of five years). Sensitization meetings- targeting ward
and village executives, village persons, community health workers (CHWs), community
influencers, religious leaders, traditional birth attendants/healers and caregivers were also
carried out in addition to orientation and training sessions targeting CHWs and frontline health
workers (Integrated Management of Childhood Illnesses- IMCI- course targeting frontline health
workers) at the district/ward levels.

**The Effectiveness of the Demand Generation Activities**

From the data generated by both the program as well as the external evaluation, there are a
couple of improvements observed.

**a. Improvements in the Levels of Awareness on these Diseases**

The study sought to explore the sources of information about the appropriate treatment of
diarrhoea and pneumonia from caregivers. As shown below, a significant proportion of the
caregivers mentioned frontline health workers (56%) and doctors/nurses/ clinical officers (56%)
as their sources of information. In addition to that, a sizeable number of caregivers (20%)
reported that frontline health workers had visited them at the households where they were
provided with information about the appropriate management of diarrhoea and pneumonia.
Indeed, it was reported by 20% of the caregivers of children under the age of 5 years that a frontline health worker has come to their household to inform them about pneumonia and diarrhoea in their children; with the highest figure being reported in Mbeya.

The evaluation explored to confirm this with the caregivers and the caregivers were requested to mention the things that they would look out for to judge whether the diarrhoea their child was suffering from was mild or more serious enough for them to seek immediate medical attention. From the findings, it was observed that most of the caregivers are able to identify various signs and symptoms – with the most commonly mentioned ones being how watery their child’s stool is and the frequency of the bowel movements.
Things you look for to judge whether the diarrhoea your child is suffering is mild or more serious enough for you to seek immediate medical attention.

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Total (391)</th>
<th>Iringa (136)</th>
<th>Mbeya (211)</th>
<th>Njombe (44)</th>
</tr>
</thead>
<tbody>
<tr>
<td>How watery the stool is</td>
<td>28%</td>
<td>26%</td>
<td>33%</td>
<td>11%</td>
</tr>
<tr>
<td>The frequency of bowel movements</td>
<td>24%</td>
<td>35%</td>
<td>18%</td>
<td>23%</td>
</tr>
<tr>
<td>Whether vomiting or has fever</td>
<td>9%</td>
<td>5%</td>
<td>11%</td>
<td>9%</td>
</tr>
<tr>
<td>The color of the stools</td>
<td>8%</td>
<td>7%</td>
<td>10%</td>
<td>-</td>
</tr>
<tr>
<td>The child’s energy level</td>
<td>8%</td>
<td>10%</td>
<td>6%</td>
<td>11%</td>
</tr>
<tr>
<td>My child has never suffered from this disease</td>
<td>6%</td>
<td>4%</td>
<td>4%</td>
<td>25%</td>
</tr>
<tr>
<td>Whether blood is in the stool</td>
<td>4%</td>
<td>3%</td>
<td>5%</td>
<td>2%</td>
</tr>
<tr>
<td>Whether the child has pains</td>
<td>4%</td>
<td>3%</td>
<td>4%</td>
<td>11%</td>
</tr>
<tr>
<td>Whether the child’s eyes are sunken and hollow</td>
<td>3%</td>
<td>2%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>The smell of the stools</td>
<td>1%</td>
<td>-</td>
<td>2%</td>
<td>-</td>
</tr>
<tr>
<td>Whether child is eating/drinking normally</td>
<td>1%</td>
<td>1%</td>
<td>-</td>
<td>5%</td>
</tr>
<tr>
<td>None</td>
<td>3%</td>
<td>4%</td>
<td>2%</td>
<td>-</td>
</tr>
</tbody>
</table>

However, the level of awareness of other critical symptoms was found to be low. Examples of symptoms that received low or no mentions included bloody stool, wrinkled or shrivelled skin as well as loss of appetite.

With regard to the levels of awareness of pneumonia symptoms that would lead the caregivers to seek immediate medical attention, it was observed that a sizeable number of caregivers could identify critical symptoms fast or difficulty in breathing (39%) and drawing of the chest (35%). However, a sizeable number of caregivers (18%), could not mention any symptom (indicated that they did not know), and more so, in Mbeya as shown below.

<table>
<thead>
<tr>
<th>Symptoms of Pneumonia would make you seek immediate medical attention for your child under the age of 5 years?</th>
<th>Total (391)</th>
<th>Iringa (136)</th>
<th>Mbeya (211)</th>
<th>Njombe (44)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The child had fast or difficulty breathing</td>
<td>39%</td>
<td>29%</td>
<td>46%</td>
<td>39%</td>
</tr>
<tr>
<td>The child was drawing their chest</td>
<td>35%</td>
<td>38%</td>
<td>26%</td>
<td>68%</td>
</tr>
<tr>
<td>The child had a high fever</td>
<td>33%</td>
<td>38%</td>
<td>33%</td>
<td>20%</td>
</tr>
<tr>
<td>The child had chest pains</td>
<td>19%</td>
<td>26%</td>
<td>14%</td>
<td>23%</td>
</tr>
<tr>
<td>The child had a cough that produced yellowish or green mucus</td>
<td>19%</td>
<td>35%</td>
<td>11%</td>
<td>5%</td>
</tr>
<tr>
<td>The child was sweating or had chills</td>
<td>12%</td>
<td>14%</td>
<td>7%</td>
<td>30%</td>
</tr>
<tr>
<td>The child was weak and docile</td>
<td>12%</td>
<td>10%</td>
<td>13%</td>
<td>11%</td>
</tr>
<tr>
<td>The child was vomiting</td>
<td>5%</td>
<td>2%</td>
<td>8%</td>
<td>2%</td>
</tr>
<tr>
<td>Child has never suffered a pneumonia attack</td>
<td>5%</td>
<td>1%</td>
<td>9%</td>
<td>-</td>
</tr>
<tr>
<td>Persistent flu</td>
<td>1%</td>
<td>1%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Child does not eat well/ has no appetite</td>
<td>-</td>
<td>1%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Shivering</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2%</td>
</tr>
<tr>
<td>The eyes become dry</td>
<td>-</td>
<td>1%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Don’t know</td>
<td>18%</td>
<td>13%</td>
<td>22%</td>
<td>14%</td>
</tr>
<tr>
<td>None</td>
<td>2%</td>
<td>1%</td>
<td>4%</td>
<td>-</td>
</tr>
</tbody>
</table>

In addition to speaking to caregivers, the study also sought to ascertain the same from health care providers. Findings from the evaluation indicated that there were existing knowledge gaps amongst the health providers on the proper management of diarrhoea and pneumonia prior to
the program implementation. As shown below, some of the interviewed frontline health workers indicated that they did not know how to diagnose and administer the medicines for diarrhoea and pneumonia treatment correctly prior to the educational drives and training sessions carried during the program implementation processes.

“…this program has really helped because formerly we didn’t know how to treat diarrhoea and we used to administer flagyl without mixing it with ORS but after this program now we are sure of what we are doing…”

*Frontline health worker, Njombe*

Consequently, it was also found that the lack of limited knowledge amongst the health providers was a contributing factor in the low uptake of recommended drug regimens (such as the usage of ORS together with zinc) as reported by one of the interviewed health workers below.

“The condition for diarrhoea was worse in the previous year because even the mothers did not trust us in the use of zinc but, after receiving this education they now believe and if you forget to give her zinc, they come back and claim for it”.  

*Frontline health worker, Iringa*

As a result of the creation of awareness during the program implementation, the caregivers now also contribute to ensuring that they receive treatment as recommended. In addition to that, and from findings of the evaluation, there seems to have been an increased level of awareness on the importance of adhering to preventive measures and timely care seeking in the event of illness. As reported by health workers in some of the intervention areas, cases of illnesses being reported at the health facilities in the recent times have reduced, and even those being seen are not in a critical condition. This could allude that the increased levels of awareness among the caregivers on preventive and timely treatment measures is working.

“1 year ago when a child was brought to hospital, he was critically ill but nowadays if a child was suffering from pneumonia or diarrhoea and brought to the clinic, then he will be having the first non-critical signs. The sick numbers have really decreased in pneumonia sickness; like this month I have only encountered 4 pneumonia patients.”

*Frontline Health Worker, Iringa*

“For last year it was a major issue but for this year even our logbooks show the number is very minimal”

*Frontline Health Worker, Njombe*

### b. Improvements in Care Seeking Behaviour

From the study findings, there seemed to have been an increase in the level of care seeking behaviours among the caregivers following the implementation of the program as reported by one of the frontline health workers in Njombe.
“… when you look at the society right now the response of taking children to the hospitals has highly grown. Caregivers now understand that once they notice symptoms of illness in children, they should get to the closest health centre immediately. We have noted an increase in treatment seeking when their children have pneumonia symptoms”. **Frontline health worker, Njombe**

From statistics availed in this region, there has been a gradual increase in the number of caregivers seeking treatment at the health facilities since 2014 as shown below.

“… 2,413 children under five were treated for Pneumonia in 2014 and 2,489 in 2015. In addition to that, 399 children under five were treated for diarrhoea in 2014 and 2,494 in 2015. **Acting Regional Medical Officer, Njombe**

In addition to that, from the evaluation, there seems to have been an increased level of awareness on the importance of adhering to preventive measures and timely care seeking in the event of illness. As reported by health workers in some of the intervention areas, cases of illnesses being reported at the health facilities in the recent times have reduced. Even those being seen are not in critical a condition, which suggests increased levels of awareness among the caregivers on preventive and timely treatment measures.

“1 year ago when a child was brought to hospital, he was critically ill but nowadays if a child was suffering from pneumonia or diarrhoea and brought to the clinic, then he will be having the first non-critical signs. The sick numbers have really decreased in pneumonia sickness; like this month I have only encountered 4 pneumonia patients.” **Frontline Health Worker, Iringa**

“For last year it was a major issue but for this year even our logbooks show the number is very minimal” **Frontline Health Worker, Njombe**

The evaluation team explored this with the caregivers and it was observed that approximately 47% of the caregivers mentioned that their children had suffered from diarrhoea within the last three months preceding the data collection exercise. The figures across the three counties were somewhat similar in terms of the proportion of caregiver that had experienced an episode/episodes of diarrhoea, with the most mentions being in Mbeya region.

7Data obtained from the Mfumo wa Taarifa wa Uendeshaji Huduma za Afya (MTUHA)
The study team sought to understand care-seeking behaviour from the caregiver, on what they did when realizing that their child/children had experienced an episode of diarrhoea. As shown below, it was evident that a sizeable number of caregivers (49%) decided to seek medical care from a health facility.

It was observed that a sizeable proportion of caregivers (14%) mentioned that they did not do anything, and instead waited to see how the diarrhoea case would progress. Whist not conclusive, the need to consult with the spouse on how to spend finances on taking care of the diarrhoea episode could have been a contributing factor. As shown below, decisions on how money was spent in the household were reported to be jointly made by the spouse (38%) or jointly with the spouse (36%).
With regard to care seeking behaviour for pneumonia, it was observed that a significant number of the caregivers (74%) did not seek medical attention from a health facility or from medical personnel on the most recent episode of pneumonia that their child had.

The study further sought to investigate why the caregivers were reporting that they did not seek medical attention for pneumonia cases and the main reason that was reported is that parents used left over medicine from a previous episode. As with the case for diarrhoea, reports from the health practitioners indicated that there had been a gradual reduction in the cases reported for pneumonia as shown below, which would allude to increased levels of awareness on preventive measures and/or the need for seeking immediate medical attention.

“There has been a constant cold weather here in Njombe but this has not increased pneumonia cases in children”. District Medical Officer, Njombe

“In my opinion the number of deaths has decreased. In normal circumstances, children who suffer from pneumonia also suffer from malnutrition and there are less children suffering from that. There’s also the
In terms of those that went to seek medical attention, 63% went to see a health professional immediately. However, there was a significant number of caregivers (33%) that indicated that they would wait for a day or two, or for a few hours (22%) before seeking medical attention. This is indicative of existing knowledge gaps and the need for continued educational activities for immediate care seeking.

<table>
<thead>
<tr>
<th>Region</th>
<th>How long did it take you before seeking medical attention?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total (102)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sought medical attention immediately</td>
</tr>
<tr>
<td></td>
<td>Waited for a few hours before seeking medical attention</td>
</tr>
<tr>
<td></td>
<td>Waited for a day or two before seeking medical attention</td>
</tr>
<tr>
<td></td>
<td>Waited longer than a week before seeking medical attention</td>
</tr>
<tr>
<td>Mbeya (62)</td>
<td>66%</td>
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<tr>
<td></td>
<td>21%</td>
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<tr>
<td></td>
<td>10%</td>
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<td>2%</td>
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<tr>
<td>Mbeya (62)</td>
<td></td>
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<tr>
<td></td>
<td>Sought medical attention immediately</td>
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<td></td>
<td>Waited for a day or two before seeking medical attention</td>
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<td></td>
<td>Waited longer than a week before seeking medical attention</td>
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<tr>
<td>Njombe (9)</td>
<td>44%</td>
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<tr>
<td></td>
<td>22%</td>
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<td></td>
<td>10%</td>
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<td></td>
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<tr>
<td>Iringa (31)</td>
<td>66%</td>
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<td></td>
<td>21%</td>
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<td></td>
<td>10%</td>
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<td>2%</td>
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<tr>
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<tr>
<td></td>
<td>Waited longer than a week before seeking medical attention</td>
</tr>
<tr>
<td>Njombe (9)</td>
<td>33%</td>
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<td></td>
<td>3%</td>
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<td></td>
<td>10%</td>
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<td></td>
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<td></td>
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<td></td>
<td>2%</td>
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<td></td>
<td>Waited longer than a week before seeking medical attention</td>
</tr>
<tr>
<td>Njombe (9)</td>
<td>33%</td>
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<tr>
<td></td>
<td>3%</td>
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<tr>
<td></td>
<td>10%</td>
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<tr>
<td></td>
<td>2%</td>
</tr>
<tr>
<td>Njombe (9)</td>
<td></td>
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</tbody>
</table>

**c. Improvements in the Awareness of Products Used to Manage these Diseases**

The study also explored the level of awareness for products used in the management and treatment of diarrhoea amongst the caregivers. It was noted that 88% of the caregivers in total were aware of ORS. A significantly lower number of caregivers were however only aware about zinc (28%) and the ORS/co-pack (16%). Interestingly, a sizeable number of caregivers (9%) reported that they were aware of none, and this trend was observed across the three intervention regions.
When asked about their sources of information, majority of the caregivers (79% overall) reported that they got to know about ORS from doctors/medical officers/ nurses in a public health facility. This trend cut across the three intervention regions. A sizable number of caregivers (22%) also reported having received this information from a frontline health worker, and more so, in Mbeya region (83%).

The same trend was observed in the source for information about zinc. As shown below, majority of the caregivers (73%) also reported having known about zinc from a doctor/medical officer/nurse in a public health facility. Similar to the trend observed with ORS, a sizeable portion of caregivers (28%) also reported having received this information from frontline health worker, and more so, in Mbeya and Njombe regions.
Consequently, and similar to the trend observed for ORS and zinc, a significant number of caregivers (68%) also reported having learnt about the ORS/Zinc co-pack from doctors/medical officers/ nurse in a public health facility. In addition to that, and in contrast to the trend observed in the second most mentioned source of information for ORS and zinc, a sizeable number of caregivers (29%) mentioned that they had gotten to know about the ORS/zinc co-pack from a pharmacy/chemist.

The evaluation also sought to find out when the caregivers got to know about these products in order to ascertain whether the activities carried out under the program contributed to the increase in awareness on the appropriate treatment of diarrhoea and pneumonia. As shown below, majority of the caregivers reported having known about ORS and zinc within the period the
program was implemented. Interestingly however, a sizeable number of caregivers (43% and 25% for ORS and zinc respectively) reported having known about ORS and zinc prior to the implementation of the program (over 3 years ago). This was an indication that there could have been other awareness campaigns carried out prior to the program implementation.

A similar trend was observed for the ORS/Zinc co-pack where majority of the caregivers reported having come to know about the product within the period the program was implemented as shown below. Similar to the trend observed for ORS and Zinc, a sizeable number of caregivers (25%) also reported to have come to know about the ORS/Zinc co-pack for a longer period than the time the program was implemented in the country. This was an interesting observation since, as indicated in the supply management section of this report, there was a major delay experienced in the implementation of this program since the ORS/Zinc co-pack and amoxicillin dispersible (Amoxicillin DT) had not been registered in the country. This was an indication that there could have been supply of this product prior to its registration in the country, with subsequent awareness campaigns being carried out to educate the public on its availability.
Similar to the status on diarrhoea, the study also sought to understand the level of awareness on the products used for treating pneumonia in children under the age of 5 years among the caregivers. As shown below, there was a high level of awareness of amoxicillin as the product used to treat pneumonia in children under the age of 5 years across the 3 intervention regions (reported by 61% of the caregivers overall).

When asked about their source of information, majority of the caregivers (84%) reported that they had received this information from a doctor/medical officer/nurse in a public health facility as shown below. This trend cut across the three intervention regions.
However, the Amoxil that they were referring to was the other forms of Amoxil. Amoxil DT has extremely low levels of awareness. Majority of the caregivers (47%) reported that they got to know about the product more than 3 years ago, and more so, in Iringa and Mbeya regions.

### Improvements in the Level of Usage

In addition to investigating the level of awareness of the products used for the treatment of pneumonia and diarrhoea, the study also sought to understand the level of their usage amongst the caregivers. As shown below, there was a high level of usage of ORS amongst the caregivers with 88% of caregivers across the three intervention regions indicating that they had ever used it. In contrast, however, very low numbers were reported for the use of zinc (24% usage) and the ORS/Zinc co-pack (13% usage).
When asked about the time they started using the products, a sizeable number of the caregivers that had reported ever having used ORS (35%) indicated that they started using the product more than 3 years ago, a period before the program was implemented. Majority however indicated that they had started using the product within the time period the program was implemented and this can be attributed as an impact of the program. This was an indication that the usage could have resulted from the awareness activities carried out during the program. A similar trend was observed in the usage of zinc, where, a sizeable number of caregivers (27%) indicated that they had started using zinc for a period prior to the implementation of the program. Majority however indicated that they started using the product within the time period the program was implemented with a significant number (29%) indicating recent usage (last 3 months). The same trend observed in the usage of ORS and Zinc was reported in the usage of the ORS/Zinc co-pack. As shown below, majority of the caregivers reported that they started using the product within the time period the program was implemented with a sizeable number of caregivers (28%) indicating that they started using it within the last 12 months, and within the last 3 months (26%) preceding the data collection period.
When asked about the top likes about ORS, caregivers reported that they liked the product because children caregivers faster to treatment (95%), it was readily available (30%) - especially in Mbeya region, and the fact that it was affordable (27%), again, in Mbeya region. Additionally, the caregivers indicated that they did not like the product because it had bad taste (39%), had side effects (20%) and was not readily available (43%), especially, in Njombe region.
Similarly, caregivers reported that they mainly liked zinc because children responded faster to treatment (96%), was readily available (31%), and because it was affordable (25%) - and more so, in Mbeya region. In addition to that, caregivers also indicated that they mainly did not like zinc because it had side effects (27%), had bad taste (22) and because it was not readily available (22%) - especially in Njombe region.

<table>
<thead>
<tr>
<th>Region</th>
<th>Children respond faster to treatment (%)</th>
<th>It is readily available (%)</th>
<th>It is affordable (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>96</td>
<td>31</td>
<td>25</td>
</tr>
<tr>
<td>Iringa</td>
<td>100</td>
<td>16</td>
<td>5</td>
</tr>
<tr>
<td>Mbeya</td>
<td>94</td>
<td>35%</td>
<td>33%</td>
</tr>
<tr>
<td>Njombe</td>
<td>100</td>
<td>35%</td>
<td>33%</td>
</tr>
</tbody>
</table>

With the co-pack on the other hand, caregivers reported that they mainly liked it because children responded faster to treatment (89%), tasted good (20%) and it caused no side effects (13%). Additionally, caregivers indicated that they did not like the co-pack because it was not readily available (26%) - more so in Njombe. This was similar to what was observed for the ORS and Zinc, because it had a bad taste (20%) and because it was expensive (17%), especially in Mbeya.
For pneumonia, majority of the caregivers (39%) indicated that they started using amoxicillin over 3 years ago.

When asked about the likes and dislikes of amoxicillin, caregivers reported that they mainly liked the product because children responded faster to treatment (96%), was readily available (25% of the caregivers, and more so in Mbeya), and tasted good (13%). With respect to the dislikes about the product, majority of the caregivers indicated that they mainly disliked the product because of its bad taste (26%), was expensive (23% of the caregivers, and more so, in Mbeya), and because it was not readily available (22% of the caregivers, and more so, in Njombe)
e. **Level of Preparedness for Future Episodes of Diarrhoea and Pneumonia**

Noting the issues of availability of essential medicines for the management of both pneumonia and diarrhoea, the study sought to assess the level of preparedness for the caregivers for future episodes of diarrhoea and pneumonia. It was observed that 57% of the caregivers did not have any product that could be used for the management of diarrhoea in their households. Only 3% have the ORS/Zinc co-pack in their household, which signifies the need for intensified effort to scaling up demand.

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**Products you have in your home right now that you could use in the future for an episode of diarrhea?**

<table>
<thead>
<tr>
<th>Region</th>
<th>None of the above</th>
<th>A full dose of Flagyl, Amoxil, Seprin or other antibiotic</th>
<th>Small packets or sachets of powder which you mix with water</th>
<th>Zinc tablets/Zinc syrups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total (391)</td>
<td>57%</td>
<td>36%</td>
<td>57%</td>
<td>36%</td>
</tr>
<tr>
<td>Iringa (136)</td>
<td>19%</td>
<td>22%</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>Mbeya (211)</td>
<td>7%</td>
<td>31%</td>
<td>8%</td>
<td>6%</td>
</tr>
<tr>
<td>Njombe (44)</td>
<td>9%</td>
<td>44%</td>
<td>8%</td>
<td>9%</td>
</tr>
</tbody>
</table>

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**Top 3 Likes for Amoxil**

- Children respond faster to treatment
- It is readily available
- Tastes good

<table>
<thead>
<tr>
<th>Region</th>
<th>Likes Faster</th>
<th>Is Readily Available</th>
<th>Tastes Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total (207)</td>
<td>96%</td>
<td>94%</td>
<td>96%</td>
</tr>
<tr>
<td>Iringa (68)</td>
<td>25%</td>
<td>15%</td>
<td>33%</td>
</tr>
<tr>
<td>Mbeya (114)</td>
<td>28%</td>
<td>6%</td>
<td>16%</td>
</tr>
<tr>
<td>Njombe (25)</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

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**What don’t you like about the product Amoxicillin?**

- Has a bad taste
- It is expensive
- It is not readily available

<table>
<thead>
<tr>
<th>Region</th>
<th>Does not like</th>
<th>Expensive</th>
<th>Not readily available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total (207)</td>
<td>26%</td>
<td>10%</td>
<td>7%</td>
</tr>
<tr>
<td>Iringa (68)</td>
<td>23%</td>
<td>7%</td>
<td>9%</td>
</tr>
<tr>
<td>Mbeya (114)</td>
<td>25%</td>
<td>12%</td>
<td>2%</td>
</tr>
<tr>
<td>Njombe (25)</td>
<td>34%</td>
<td>12%</td>
<td>2%</td>
</tr>
</tbody>
</table>
For pneumonia on the other hand, while the re-use of Amoxil or the use of antibiotics purchased over the counter is discouraged, it was interesting to note that a proportion of the caregivers still keep left over antibiotics for future use. That notwithstanding, majority of the caregivers (39%) had paracetamol to manage fever for a future episode of pneumonia.

### Efficiency of the Demand Generation Activities in Tanzania

It was apparent that the demand generation activities were carried out through a multi-sectored approach with representation from key sectors of the MoHSW, intervention districts councils, professional associations, faith-based organizations as well as representation from other key stakeholders and development partners. This alluded to clear roles and responsibilities being assigned at the onset for the activities that were planned to be more effective. To encourage participation and ownership, activities were driven through MoHSW, First through the development of communication materials that encouraged a conducive and supportive policy environment for strengthening healthcare services for the prevention and treatment of diarrhoea and pneumonia, and secondly through the development of tailored communication materials for social mobilization and behaviour change at the local level of the targeted regions.

A few elements were noted that affected the efficiency of the demand generation activities. First, the involvement of the private sector appeared to have been limited. As reported by one of the private partners interviewed, some of the participants targeted during the demand generation activities were more business oriented (such as wholesalers) and not key contacts with the caregivers.
“I feel the awareness creation activity was done partially and not completed. Yes, to some extent because we were in a meeting and they said that their success rate is about 35% to 40% that is a good rate to consider that this has been in a short time span. But the private sector never got itself involved well...some of these people were targeted wrongly i.e. the pharmacies and wholesalers... The main target (80%) should have been paediatricians who in some areas have been overlooked. So for prescription of drugs, doctors should be major targets and not business...” Private Partner

Further, noting that the targeted regions were largely rural, and therefore had few or no public health facilities, frontline health workers would be the next link for caregivers seeking care. Taking cognizance of the fact that this cadre was yet to be formally introduced in the country (Community Health Workers), other health practitioners/ frontline health workers were the next best option. Nonetheless, as reported in the preceding sections, only 20% of the caregivers reported as having been visited by a frontline health worker. By having only 20% of the caregivers covered, it meant that information could only be provided by doctors, clinical officer and nurses, yet the interaction between these and the caregivers is limited to instances when a child under 5 years is sick. It means that there would be a need to increase the number of frontline health workers to ensure adequate coverage.

**Sustainability of the Demand Generation Activities in Tanzania**

As observed earlier, it was apparent that the demand generation activities were carried out through a multi-sectored approach with representation from key sectors of the MoHSW, intervention districts councils, professional associations, faith-based organizations as well as representation from other key stakeholders and development partners. This involvement of multiple players ensured that multiple interests were addressed and multiple organisations were able to make contributions to the implementation activities. Further, engaging these multiple sector players meant that there was more ownership in the program activities. However, there are few things that can be done to enhance the sustainability of the demand generation activities in Tanzania.

**a. Need for Demand Generation Activities Targeting All Household Members**

As indicated in the preceding sections, decisions about how money is spent within the households is largely made by the spouse (38%) or jointly by the spouse (36%). This is largely dictated by the traditional practices and consent therefore has to be sought on expenditures on
health care services. This notwithstanding, childcare is primarily left to the mothers with the involvement of the fathers and other male guardians remaining low as reported below.

“…although there are increased efforts for the male parents to be involved in child care, the tradition has placed major decisions of health upon the male gender whereby the mother has to seek permission from the father to take the child to a health centre. It’s a fact that the care of a child has been largely placed on the mother and the fathers are not involved at all and there are times when the mother has more than one child to care and there is one who is sick hence they don’t have support for the child care.” C4D Manager

It was noted that despite traditional practices playing a role in affecting healthcare seeking behaviours, the demand generation activities were not tailored to the particular issues that affected care seeing among men and women, and instead, general activities targeting all parents were implemented as shown below.

“There haven’t been any [educational forums] to the male specifically. We have targeted all parents without being specific with their gender… we did not base it on gender differences in education provision.” C4D Manager

As a result, the involvement of the fathers/ male guardians in encouraging demand seeking practices in child healthcare continues to be low as reported as reported in one of the intervention areas.

“When the guardians come for vaccination service or reproductive health and children service, they are given the needed information. We have observed that fathers or male guardians who come are very few despite of the direct connection that they might be having with the caregivers, guardians or parent”- District Medical Officer (DMO)- Iringa

For sustainability of the gains made through demand generation activities implemented under this program, it will be key to ensure that gender issues that continue to impact care seeking behaviours in pneumonia and diarrhoea treatment are addressed.

**b. Challenges of Long distances, Lack of drugs and High Cost of Treatment**

As it was essential for the program to prioritize strategies to reduce non-financial and financial barriers to treatment for caregivers, the study sought to understand the key challenges that caregivers were facing during care seeking for treatment of diarrhoea and pneumonia for their children under the age of 5 years. As shown below, whilst the implemented demand generations activities were found to be very effective, a number of key issues were identified, that, if not adequately addressed, would potentially reverse the gains made in generating interest and subsequent behaviour changes in care seeking. These included the long distances to the health
facilities, the lack of drugs at the facilities and the high cost of treatment for children under the age of 5 years.

<table>
<thead>
<tr>
<th>Key Challenges Faced by Caregivers in seeking Healthcare services for Diarrhoea and Pneumonia</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>The long distance from the health centres</td>
<td>16%</td>
</tr>
<tr>
<td>Lack of drugs at health centres</td>
<td>15%</td>
</tr>
<tr>
<td>High cost of treatment</td>
<td>11%</td>
</tr>
<tr>
<td>We lack the money for treatment and purchase of drugs</td>
<td>10%</td>
</tr>
<tr>
<td>Wrong advice from community members against modern medicine in favour of using herbal medicine</td>
<td>5%</td>
</tr>
<tr>
<td>Problems with transport to get to health facilities</td>
<td>4%</td>
</tr>
<tr>
<td>Lack of education on health among the caregivers</td>
<td>4%</td>
</tr>
<tr>
<td>There are long queues so treatment is delayed</td>
<td>3%</td>
</tr>
<tr>
<td>Lack of health insurance</td>
<td>3%</td>
</tr>
<tr>
<td>Lack of time to seek treatment due to domestic duties</td>
<td>3%</td>
</tr>
<tr>
<td>Poor service from health workers</td>
<td>3%</td>
</tr>
<tr>
<td>Lack of attendants’ / service providers</td>
<td>2%</td>
</tr>
<tr>
<td>Lack of support from husbands/male partners</td>
<td>2%</td>
</tr>
<tr>
<td>Prescribing medicines without testing</td>
<td>1%</td>
</tr>
<tr>
<td>Lack of support from the community</td>
<td>1%</td>
</tr>
<tr>
<td>Lack of clean water at health facilities</td>
<td>1%</td>
</tr>
<tr>
<td>Low education among health workers to advise on different health issues</td>
<td>1%</td>
</tr>
<tr>
<td>Being served by attendants of one gender at the centre</td>
<td>1%</td>
</tr>
<tr>
<td>None</td>
<td>13%</td>
</tr>
<tr>
<td>I don’t know</td>
<td>1%</td>
</tr>
</tbody>
</table>

The element of having healthcare services available closer to the people is critical for sustainability of the behaviour changes achieved amongst the caregivers. One of the ways this can be achieved is through lobbying/advocacy to the government for the prioritization of the construction of more health centres in areas where these are far off. Subsequently, the need for a cadre that would work closely with the population at the grassroots (CHWs) is also necessary. Findings from the evaluation indicated that UNICEF had pursed Integrated Community Case Management (iCCM) during the program implementation in order to bring the health services closer to the community. The Tanzania health policy however did not allow CCM. As such, there was no formal cadre of Community Health Workers (CHWs) who would be able to assist in reducing the illnesses burden at the community level. Treatment of diarrhoea and pneumonia cases was therefore essentially left at the hands of the health workers at the health facilities.

In addition to that, and from the findings presented in the preceding sections, the lack of drugs at the facilities as well as the high cost of treatment are issues that would need to be addressed in order to avoid reversing the gains made through behaviour change in care seeking. There
may be a direct correlation between the long distances to the health facilities, the lack of drugs at the facilities where caregivers seek treatment and the high cost of treatment. Since treatment for children under the age of 5 years is free of charge at the public health facilities, and since these are not easily reachable, caregivers could be opting to seek treatment at private facilities/pharmacies/chemists as an alternative. As indicated in the preceding sections, this program mainly focused on the public health sector and the gains made in this sector may not have trickled to the private sector. Supply of the essential drugs at the private facilities may therefore not be guaranteed. Also, since these are business-oriented outfits, health services are offered at a cost, even for children under the age of 5 years. The need for more integrated efforts for the private health sector are therefore necessary for sustainability. It is notable that UNICEF in collaboration with MOHSW and UNFPA held a successful sensitization during the program implementation for inclusion of Amoxil DT, Zinc/ORS co-packs and other family planning and life-saving commodities in the ADDO (Accredited Drug Dispensing Outlets- small pharmacies under Public-Private partnerships making essential medicines available in rural villages) list of medicines.

### 6.2.3 Improving Service Delivery in Tanzania

The MoHSW with the support of WHO started a distant learning Integrated Management for Childhood Illnesses (dIMCI) pilot in September 2012, which was aimed at scaling up the IMCI program adopted in 1996 in Tanzania. The dIMCI training materials incorporated recent policy changes in the management of diarrhea and pneumonia using combined Zinc/ORS and Amoxicillin DT as outlined in the UNCoLSC. The service delivery activities implemented under this program were aimed at supporting Tanzania scale up the implementation of the dIMCI in primary health facilities in underserved areas.

**The Need for the Service Delivery Component**

The integrated Management for Childhood Illnesses (IMCI) was adopted in Tanzania in 1996 and was followed by extensive roll out to train health providers on the same. The challenge with IMCI is that only less than half of health facilities had IMCI trained staff according to findings from the SARA study carried out in 2013. Moreover, it was observed that there had been no re-training after the revision of the IMCI guidelines in 2009, where Amoxil DT was included at the
first line treatment for pneumonia treatment and Zinc was added for diarrhoea treatment. Thus, knowledge gaps were bound to exist among the health providers. As reported by one of the frontline health workers in Njombe, there existed knowledge gaps in the diarrhea and pneumonia case management prior to the implementation of the Diarrhoea and Pneumonia Treatment Initiative.

“…this program has really helped because formerly we didn’t know how to treat diarrhoea and we used to administer flagyl without mixing it with ORS but after this program now we are sure of what we are doing…”

Frontline health worker, Njombe

One would assume that the easiest remedy would have been through IMCI training but even this was challenging because the training takes a lot of time, and meant that clinical staff would be away from their duty stations and not able to provide treatment service. As indicated above, the MoHSW with the support of WHO started a distant learning Integrated Management for Childhood Illnesses (dIMCI) pilot in September 2012, which was aimed at scaling up the IMCI adopted in 1996 in Tanzania. UNICEF supported this process where findings from the formative research (carried out at the onset to inform the implementation processes of the Diarrhoea and Pneumonia Treatment Initiative) were also incorporated. Factors deemed to affect service delivery from the formative research included breath/range of services at the health facilities, competence/expertise of staff, affinity and longer service hours. The service delivery aspects of the implemented program had the following expected results:

a) Having providers trained on appropriate management of diarrhoea and pneumonia
b) Having providers equipped with appropriate equipment, materials and supplies
c) Having frontline health workers appropriately monitored on a regular basis
d) Having supervisors motivated to conduct regular, ongoing supportive supervision for frontline providers
e) Having standardized operating procedures for supervision of integrated case management

**Activities Conducted Under the Program to Improve Service Delivery**

The service delivery component of the program was mainly implemented through the implementation of the dIMCI. This was a 10-week training program, which incorporated 3 days of face-to-face classroom learning sessions and 2 follow-up visits by facilitators/supervisors at their duty stations. It was targeted at up skilling the frontline health workers but it is important to
understand the process of selection, training and supervision of these workers to improve service delivery.

**a. Selection of Frontline Health Workers, Training and Equipment with materials**

In partnership with MoHSW, over a 1000 first line-health workers were selected for training in the six interventions that were of interest. About 70% of these were female frontline health workers while 30% were male health workers. These districts were reported to have 330 health facilities. Following this training, 315 health facilities were reported to have at least one service provider trained. This translated to about 95% coverage, which, when put in context (the 330 health facilities were reported to have about 1,414 providers), meant that about 72% of providers had received training. This presented a gap in training needs. To address it, 18 dIMCI trainers were training on how to conduct training sessions and created a pool of trainers at regional and district levels as indicated below.

“We wrote a letter to the regional and district doctors to select people who can be taught and later on teach others and we got a lot of facilitators who are now all over the country giving teachings.” *Ministry of Health, Child Health in charge*

In addition to that, it was found that reference and job aids had been provided to assist the health workers with the training and their work after the training. About 600 sets of training materials were reported to have been printed. All trainees and trainers were provided with a set of these materials as well as an IMCI chart booklet to use during training and to refer to at the duty stations. Moreover, post-training follow-ups carried out were reported to have shown that the performance of the health providers in case management had greatly improved.

**b. Gender of the frontline health workers**

That majority of the frontline health workers trained were female since traditionally the issue of childcare is still regarded as a female affair and therefore attracting more female in the provision of healthcare for children. As indicated in the preceding sections, about 1% of the caregivers interviewed had cited that being served by attendants of one gender at the health centres was one of the challenges they faced when seeking health care services for their children under five. Upon confirmation of the gender of the health workers at the facilities, majority of them (82%) were indeed found to be female health workers as shown below. Interestingly, majority (63%)
of the caregivers indicated that they would prefer to be attended to by more male health workers, as compared to female health workers.

Thus, the study sought to investigate whether the gender of the service providers played a role in impacting care seeking behaviour. It was found that caregivers perceived male health workers to be more understanding (76%) as shown below.

The need to look into gender aspects in service delivery may be worth looking into in the future, in order to encourage continuous care seeking behaviour. This notwithstanding, communities seem to be largely relating well with the frontline health workers as indicated below (71%).
c. Supervision and Support for the Frontline Health Workers

Periodic supervision visits by teams trained on dIMCI case management were reported to have been carried out (every six weeks) to help in the transfer of knowledge and skills learnt through the course to day-to-day activities at the health providers’ places of work. Findings from the evaluation also affirmed that provisions had been put in place to ensure regular supervisory visits at the health centres that were aimed at addressing existing knowledge gaps and providing on-the-job support on a continuous basis. Standardized guidelines to guide the supervision visits had also been developed as shown below.

“We don’t use frontline health workers without a person from the unit to go and look at the quality of the work which they conduct… We conduct supervision in regional hospitals and we prepare guidelines that are facilitated at those levels without being on the ground. At the district levels we are usually given someone to go with to the health centres to see whether the guidelines are being used as they should be.”

Ministry of Health, Child Health in charge

“In terms of monitoring centres we do supervision termed as supportive supervision where by one stays at the centre for a certain time helping and cooperating with the health workers and ensuring that knowledge gaps are filled. At least one station can be visited a quarter per year. “District in charge, Mbeya

“We have someone in charge of us who passes to make sure that the services we provide are correct.”

Frontline Health Worker, Iringa

Though this was the case in most of the project implementation areas, some project areas, such as Njombe, were found to be lagging behind in terms of regular supervisory visits. As reported
by one of the interviewed frontline health worker, no supervision visits had been carried out at the centres in the area after the formal training session had been completed. The workers in this area did not therefore have a channel to air their challenges and there was no forum to address existing knowledge gaps in service delivery.

“\textit{We haven’t received anyone to supervise us maybe it could have eased our situation and we could tell them our challenges. Since we finished our trainings we haven’t seen anyone coming to our centre}”

\textit{Frontline Health worker, Njombe}

In addition to that, and as reported by some of the private partners interviewed, the trainings (and therefore supervision) targeting frontline workers seemed to have been more concentrated in the public sector. Few (or none) of the frontline health workers were drawn from the private sector, except for the other categories; such as pharmacists, and wholesalers seemed to have been incorporated in the trainings. This therefore created gaps in service delivery in the private sector.

“No training was done to the front line workers… training was only to physicians in the private sector…”

\textit{Private Partner}

\textbf{Effectiveness of the Improving Service Delivery Component in Tanzania}

The activities carried out under the service delivery component of this program were found to be effective as expounded below.

\textbf{a. Information on childhood disease management cascaded to the caregivers}

From the findings of the evaluation, it was found that health providers have been instrumental in cascading information on best practices for managing childhood diseases (including diarrhoea and pneumonia) amongst the caregivers. As shown below, doctors/nurses/ clinical officers (mentioned by 53\% of the caregivers) and frontline health workers (mentioned by 45\% of the caregivers) were found to be the most effective in providing this information to caregivers.
In addition to that, the caregivers also reported that they trusted them the most as compared to other sources of information as shown below. That notwithstanding, and taking cognizance of the fact that frontline health workers are the first point of contact with the caregivers, there is a need to invest more in developing their skills in personal conduct and interpersonal relationships to scale up the level of trust that caregivers have in them, and more so, in Mbeya and Njombe (where the levels of trust in frontline health workers was reported to be particularly low).
b. Meeting Demand for Services at the local level

Findings from data collected from caregivers, it was evident that health providers, and more so, frontline health workers, were perceived to have alleviated or lessened the challenges faced by caregivers in communities during care seeking. As shown below, 64% of the caregivers indicated that frontline health workers have been able to assist in the lessening of the challenges faced by caregivers during the management of child illnesses. This notwithstanding, there is a need to scale up the level of contact with the caregivers for more effectiveness. Only a small proportion of caregivers (20%) have for instance been visited at the household to be educated about diarrhoea and pneumonia disease management as shown below.
**Efficiencies within the Implementation of the Service Delivery Component**

Various efficiencies were observed in the implementation of the service delivery component and these are listed below.

**a. Distance Learning Option**

The dIMCI course implemented in Tanzania was the first in the world to roll out to be rolled out in large scale. One of the key advantages of using this model of training has been a reduction in the cost of training by about 60% of the original cost per person; while the same time achieving the desired results of affecting knowledge.

**b. Efficiencies during supervisions**

In addition to that, the fact that the pneumonia and diarrhoea interventions were carried out as part of wider health interventions in Tanzania enabled cost efficiencies in the implementation of activities. Facilities in the selected intervention areas were for instance provided with IMCI chart booklets and other training aids on pneumonia and diarrhoea case management printed by UNICEF using other resources. Additionally, and as shown below, supervision visits for diarrhoea and pneumonia are carried out as part of other health interventions and are therefore not budgeted for separately.

> “Since supervision is not budgeted for, what I do is to take an opportunity when conducting other kinds of supervisions to check if the medicines for diarrhoea and pneumonia are available and being used in a procedural manner.” District in charge, Njombe

**Sustainability of the Service Delivery Component**

While the program was implemented efficiently, there are issues that needed to be checked for to encourage sustainability of this model and these are elaborated in the subsections below

**a. Limited supervision**

Whist it was ideal that the program was able to ride on other interventions to carry out supervision visits to check that the recommended management of diarrhoea and pneumonia was ongoing, this created gaps in the supervisions and some areas ended up being left out as shown below.
“We haven’t received anyone to supervise us maybe it could have eased our situation and we could tell them our challenges. Since we finished our trainings we haven’t seen anyone coming to our centre”

*Frontline Health worker, Njombe*

For a more sustainable approach for the management of diarrhoea and pneumonia, it will ideal to ensure that budgetary allocations are made specifically to assure that the gains made through the program are sustained.

**b. Policy Challenges**

As indicated in the preceding sections, the health policy in Tanzania did not allow for iCCM yet in the country. As a result, provision of care was left at the hands of health staff at the health facilities. Though the lowest level of public health facilities were the dispensaries, in which the frontline service providers in the public sector were stationed; there was still a perception that these were far from the communities that they were intended to serve. These long distances to the health facilities were reported as a barrier to access of medical care. A more efficient and effective model would be house-to-house calls by the CHWs. As a result of strong advocacy by various development partners including UNICEF, there has been a significant development in the health sector since 2014, and a formalized cadre of CHWs was anticipated to be introduced.

In anticipation of this, UNICEF supported the training and implementation of an integrated community Reproductive, Maternal, Newborn and Child Health (RMNCH) package through NGOs. This package was developed by the Reproductive and Child Health Services (RCHS) of the MoHSW. Once the issues around policy and cadre of CHWs were clarified, there would already be a group of trained CHWs that would be integrated into the system, a factor that would work towards consolidating the gains achieved through the implementation of the diarrhoea and pneumonia program in Tanzania.

**6.2.4 The Supplies Management Component**

The supply management component of the program needed to First ensure that the recommended essential medicines for the treatment of diarrhoea and pneumonia were formerly registered in the country and secondly to ensure their availability through strengthening procurement and supply chain management.
The Need for the Implementation of the Supplies Management Component

At the time of implementing the program, the essential medicines for the treatment of pneumonia (Amoxil DT) and diarrhoea (ORS/Zinc co-pack) were not registered for distribution in Tanzania. The first step therefore was to get these products registered for distribution by Tanzania Food and Drug Authority (TFDA). A major delay was however experienced in a process that took almost a year of lobbying and advocacy. The pneumonia products were finally registered in 2014 after a year of continuous follow up with TFDA by UNICEF as well as coordinated advocacy with MoHSW, CHAI and United Nations Commission for Life Saving Commodities for Women and Children (UNCoLSC) (two types of Amoxicillin DT manufactured by CSPC Pharmaceutical Group Ltd were registered; China- 125mg and Medopharm, India- 125mg and 250mg). The Zinc/ORS co-pack however took a bit longer and was reported to have been recently registered (2015) with a local pharmaceutical company, Shelys Pharmaceuticals, being licenced to co-package these products. The supply management aspect of the program thus had the following expected results

a) Having over the counter availability of zinc
b) Having frontline community health workers adequately stocked with ORS, zinc and amoxicillin
c) Having facilities adequately stocked with ORS, zinc and amoxicillin
d) Having a policy on community-based treatment of pneumonia in place
e) Having amoxicillin dispersible tablets and ORS/zinc co-packs included in the Essential Lists of medicines in Tanzania
f) Having amoxicillin dispersible tablets and ORS/zinc co-packs products registered in the country
g) Having national procurement of amoxicillin and ORS/zinc co-packs meet projected needs

Supplies Management Activities Implemented Under the Program

As indicated, a major delay was experienced in getting the recommended essential medicines for the treatment of pneumonia and diarrhoea registered in the country. In the interim while, the program waited for the registration and licensing of the recommended products, UNICEF with the help of MOHSW obtained a special importation permit for Zinc/ORS co-packs from Universal Corporation Limited and procured them for the public sector in Tanzania. All products from the
2014 shipment were delivered to MSD and distribution done in 2015. UNICEF also worked closely with the private sector- the Pharmaceutical Council- to ensure the new formulations were available at Accredited Drug Dispensing Outlets (ADDOs) (small pharmacies under Public-Private partnerships making essential medicines available in rural villages).

**Effectiveness of the Supplies Management Activities**

Following the delay in the acquisition of the recommended medicines for the management of pneumonia and diarrhoea, interim solutions were provided as indicated above. Though this was the case, it was found that there was low uptake in the products’ use because training sessions had not been carried out.

“Although we had stock for Zinc and amoxicillin DT and they were new, we discovered that people did not use them because they did not know them that is why we went. After the training amoxicillin began to be subscribed. We have advised on the use of pills for Amoxicillin DT and Zinc” *Diarrhoea and Pneumonia Coordination Group Official*

Following the training sessions and educational initiatives however, change was seen, especially in the uptake of zinc in the treatment of diarrhoea as shown below. Co-packaging the two products (ORS and Zinc) also helped in driving the usage of zinc as shown below.

“They were first made aware of the disease, provided with knowledge on how to take care of the sick and also how to identify symptoms. Furthermore, they were told on how to use the dosage especially for zinc and how to use the two medicines at once. This is because previously people were used to orals only but due to this program these medicines were then packed together”. *C4D Manager in charge of Diarrhea and Pneumonia-Health Promotion Unit*

“This plan for packaging the medication in one package has made usage easier for the caregivers and still on the same note; this has made children heal fast enough because they now get a complete dose of Zinc and ORS.” *Ministry of Health, Assistant Director, Reproductive and Child Health*

You cannot give instruction on ORS and not give about zinc; you will have to give for both. This has increased uptake of Zinc. *Frontline Health Worker, Iringa*

When the community realized their children were sick they went to the pharmacy to get ORS without zinc but once they got educated they know that zinc is important for children with diarrhoea. *Frontline Health Worker, Njombe*

The evaluation also to find out whether there had been constant supply of the medicines for treating diarrhoea and pneumonia for the under five children. From the findings, there has generally been a constant supply of these medicines in the facilities as shown below.

“We also ensure that treatment medication for pneumonia is always available at the centre. I would say that the health centres have improved because there are better services and modern diagnostic equipment. On
the same, the easy availability of Amoxicillin DT has also really helped in eradicating this problem. Also through this very project, UNICEF has provided medication for the treatment of diarrhoea and pneumonia to children under the age of 5 years” *Ministry of Health, Assistant in charge of Health*

“The medicines were bought by UNICEF in a PUSH strategy. Orals and Zinc are always available. UNICEF has purchased medicines, which are for the whole country and distributed medical equipment so these organizations have really helped. UNICEF brought Amoxicillin DT medicine which has been easy to use than syrup medications.” *Ministry of Health, Child Health in charge*

“There wasn't any limit with medicines; they have reached the whole country. There were instructions and orientations from UNICEF and they have gone to the whole country. The medicines in the market so far are from UNICEF.” *Coordination Group Official*

A closer look at the supply in the specific regions where the project was implemented, it was found that generally shortages had not been experienced in some sections of Iringa and Mbeya as reported below.

“We don’t have shortage in medicines for pneumonia and diarrhoea” *Frontline Health worker, Iringa*

“Since they started distributing those medicines they are always available.” *Frontline Health worker, Mbeya*

In Njombe and sections of Iringa and Mbeya however, it was reported that shortages had been experienced where the supply did not meet the demand, or the medicines, (especially amoxicillin) took a bit longer than expected to reach the facilities in the area as shown below. It was noted that the demand for the drugs has in most cases exceeded the supply.

“In the last year and the beginning of this year we really had a shortage. UNICEF purchased for MSD but the package received was small. We requested for 600 packets and we only got 100” *District IMCI Focal Person, Mbeya*

“We are mostly out of Amoxicillin. We run out of drugs sometimes it takes up to three days”. *Frontline health worker, Njombe*

“…the drugs were not enough to solve the basic requirements. Sometimes we are out of stock especially for the Amoxicillin DT; but the ORS has not had any such issues. The stock of the drugs brought to MSD is less than the requirements needed.” *District in charge, Mbeya*

“For the ones which were brought by the PUSH system, they were not enough because they never knew the demand of each station. Amoxicillin DT is a problem because it has not entered into the market so it becomes a problem when it is finished. Amoxicillin DT was scarcely found in the market and even other stations did not have it. MSD say that the never knew the demand” *Frontline Health worker, Iringa*

“They continued providing the drugs as they finished but the drugs are not enough compared to the population of where we work the patients are many so most of the time we are out of stock”. *Frontline Health worker, Iringa*
Findings from the caregivers also affirmed these findings, where as shown below, the key challenges reported when acquiring drugs for the treatment of diarrhoea and pneumonia were cited as being the long distances to the point of supply (reported by over 30% of the caregivers, and more so, in the acquisition of the diarrhoea medicines where 41% of the caregivers reported that the distance to the outlets was too far), the unavailability of the drugs at the outlets (cited by over 18% of the caregivers, and more so, for pneumonia medicines where 24% of the caregivers reported that the drugs were unavailable) and the cost element associated with their acquisition (cited by over 5% of the caregivers, and more so, for the acquisition of pneumonia medicines where 30% of the caregivers indicated that the cost was high). The long distances to the outlets were especially pronounced in Mbeya, while the unavailability of the drugs in the outlets was mostly felt in Njombe. The high cost in acquiring the medicines was evenly pronounced in the three intervention regions, but more so in Iringa and Njombe as shown below.

The study sought to investigate further in order to understand the challenges that were being experienced in the acquisition of specific products for the treatment of diarrhoea and pneumonia. With regards to ORS, only 7% of the caregivers reported that they had tried to purchase the product and it was not available. This was reported to be largely within the last 3 months preceding the data collection process.
Further, caregivers who had tried to purchase ORS and it was not available indicated that they had largely tried to purchase the same from a public health facility as shown below.

When asked about the frequency of the unavailability of ORS, most of the caregivers (83%) reported that this had happened only once. In addition to that, the caregivers reported that the situation seemed to be improving (67% indicated that the situation was better than the previous year as shown below).
With Zinc, it was noted that a majority of the caregivers (78%) had never tried to purchase the product for managing diarrhoea. This was an indication that there was low supply of the product, or that caregivers were opting for other products to manage diarrhoea in their children. Only 4% of the caregivers had tried to purchase the product and it was unavailable and more so, within the last 3 months preceding the data collection process.

Similar to ORS, caregivers who had tried to purchase Zinc and it was not available had mostly tried purchasing it from a public health facility as shown below (62%). This cut across the three intervention regions.
When asked about the number of times the caregivers had tried to purchase Zinc and it was unavailable, it was noted that this had largely happened only once (84%) and that the situation was largely better (reported by 66%) than the previous year.

With regards to the ORS/Zinc co-pack and similar to Zinc, majority of the caregivers (87%) indicated that they had never tried to purchase it for the management of diarrhoea. This was indicative of either a low uptake of the product or an issue with supply in the intervention regions.
For those that had tried to purchase it and it was unavailable (3% of the caregivers), majority (36%) indicated that they had tried to do so within the last 12 months preceding the data collection process. Similar to the other products discussed above, this was largely at public health facilities (reported by 64% of the caregivers).

For those that had tried to purchase it and it was unavailable (3% of the caregivers), majority (36%) indicated that they had tried to do so within the last 12 months preceding the data collection process. Similar to the other products discussed above, this was largely at public health facilities (reported by 64% of the caregivers).

Similar to ORS and Zinc, caregivers had largely tried to purchase the ORS/Zinc co-pack only once and did not find it (reported by 83% of the caregivers). In addition to that, the situation was reported to have largely improved than the previous years (reported by 60% of the caregivers) as shown below.
For pneumonia, the challenges reported by caregivers in the acquisition of amoxicillin mainly included the long distances to the outlets where these drugs were available (reported by 33% of the caregivers and more so in Njombe), the high cost of acquiring the drugs (reported by 30% of the caregivers, and more so in Mbeya) and the unavailability of the drugs at the outlets (reported by 24% of the caregivers, and more so in Njombe) as shown below.

When asked whether they had tried to purchase the medicine (Amoxil) and could not find it, majority of the caregivers (83%) indicated that they had not. A sizeable number however (17%) indicated that they had tried to purchase the product and it was unavailable. In addition to that, majority of these caregivers (68% of those that had indicated that they tried to purchase the medicine and it was unavailable) indicated that they tried to do so at a public health facility.
This notwithstanding, majority of these caregivers (65% of those that had tried to purchase the product and it was unavailable) indicated that the situation was better than the previous year; with the exception of Njombe.

**Efficiencies Observed with the Supplies Management Activities**

The program in Tanzania mainly focused on supporting the supply management of essential medicines for the treatment of diarrhoea and pneumonia in the public sector. However, for a more effective and inclusive approach, UNICEF in collaboration with MOHSH and UNFPA held
a successful sensitization during the program implementation for inclusion of Amoxil DT, Zinc/ORS co-packs and other family planning and life-saving commodities in the ADDO (Accredited Drug Dispensing Outlets- small pharmacies under Public-Private partnerships making essential medicines available in rural villages) list of medicines. This ensured a larger coverage and availability of these products to the population.

In addition to the ADDO outlets, the private sector in general also received support from what was initially meant for the public sector as shown below. Training on supply chain management teams for a more effective management of the supply of the medicines to meet the demand.

“UNICEF funded purchase of medicine for public/government hospitals for 2 years. For private health centres and pharmacies, they have been supported to access these medicines, though they were not beneficiaries in the funding availed to public hospitals. We have also offered training in supply chain management which has ensured efficiency in ordering and receiving the drugs.” C4D Manager

“Supply chain management staff were given trainings on how to procure these medicines and IMCI underwent trainings on how to care for children less than five years.” C4D Manager

Sustainability of the Supplies Management Activities

In order to ensure that the gains made from the program are sustainable, a number of hitches experienced under this program would need attention, in the interest of sustainability. These are as discussed below.

a. Report and Request forms (R & R forms)

It was noted that the Integrated Logistic System (ILS) was used in Tanzania for ordering medicines and medical equipment, whereby health facilities order by pull system to MSD using the R&R forms. The forms are pre-printed version of the essential medicines and equipment that are considered to be vital at health facilities. As an effort to ensure that public health facilities can order Zinc/ORS Co-packs and Amoxicillin DT, UNICEF in collaboration with Pharmaceutical Service Section (PSS) included these new formulations in the new R&R forms. It was anticipated that the new forms would start being used by the MOHSW once the old stocked was finished. This change was expected to be rolled out at the beginning of 2015. From findings of the evaluation, it was conclusively established that all facilities in the intervention areas had adopted the new R & R forms for ease of managing the demand and supply of the essential medicines.
for the management of diarrhea and pneumonia. As shown below, hitches in supply were experienced in some of the regions as shown below.

“What makes these medicines unavailable is not being able to take them to all stations because of depending on the systematic distribution and the amount of medicines taken being little.” Coordination Group Official

“We are mostly out of Amoxillin. we run out of drugs sometimes it takes up to three days”. Frontline health worker, Njombe

“I think we are making progress because before the condition was worse than the present time. The number of people sick with pneumonia is less compared to last year. Average efforts have been made, among of them includes: reaching them and cure the children with the infections and more over medicines have been provided in all the places but I think effort should be made more especially on the availability of the medicines. Most of the children medicines are needed on emergency basis.” District Medical Officer, Njombe

A number of factors were found to have contributed to the scenarios above and which would need to be addressed. First, the quantities ordered were based on estimates. There was therefore the likelihood that there were overestimations or underestimations occurring which created discrepancies in supply management. Secondly, since the additions in the R & R form were new, it was possible that the health workers had not had a chance to interact and internalize the content and information required for guiding the supply of the essential medicines for the treatment of diarrhoea and pneumonia. It would be ideal to re-train the supply management staff on these components for more effective use of the revised R & R forms.

**b. Availability of drugs through private sector channels**

It was found that in the private sector, drugs were not bought at all or were bought in low quantities. This was attributed to accessibility issues, where the wholesalers would opt to concentrate on areas with high demand only for profitability. The pricing of the drugs in the private sector was also found to be too high and therefore discouraged the health practitioners from purchasing them.

“… in the private sector where drugs like zinc and ORS are not bought and amoxicillin DT is bought in low quantities…for now those selling them are far away from the wholesalers of the drugs. Sometimes the wholesalers look at areas where there is high demand and do not concentrate on low demanded areas. Another challenge is the control of prices of the drugs. This is because the drugs are sold at three times the profit which poses a problem because our aim is for the drugs to reach the children so when they sold at high prices it makes no sense…” Supply Chain Manager
It will be ideal to bridge the demand and supply gaps in the private sector for more effective supply of the essential medicines to the general public. As shown below, there is a danger of revering the gains that have been made through the implementation of the program by the population resolving to old habits in the treatment of diarrhoea and pneumonia.

“We mostly request for Amoxicillin DT and sometimes we miss it therefore we use the old ones. Another challenge is the availability of medicines. When patients come to providers you figure that there are no medicines, this pushes you to provide other medicines because you cannot just leave them with nothing.”
– IMCI Focal Person, Mbeya

c. Assured supply of essential medicines

In addition to that, and from findings of the evaluation, it was reported that MoHSW owed a high debt in clearance, port, storage and distribution of medicines and medical equipment to MSD. This situation led to a long delay at the port and MSD due to lack of funds at MSD. In order to avoid delays for the diarrhoea and pneumonia products, UNICEF had to use its clearing agent to clear pending consignments and sought funds from UNCoLSC to pay for some of the pending storage and distribution fees. This was a big threat to the timely implementation of the program activities. For continued sustainability, it is ideal that measures are put in place to assure the constant supply of the essential medicines beyond the program.

6.2.5 Public-Private Partnership Activities

The intention of the activities under the Public-Private Partnership Activities was to strengthen public-private partnerships and make better use of private sector channels for appropriate diarrhoea and pneumonia treatment.

The Need for Public-Private Partnership Activities in Tanzania

The program in Tanzania was mainly led through the MoHSW where a multi-sectored approach was adopted in both the public and private sectors as discussed in the sections above. There was therefore a participatory approach adopted, which worked towards achieving the following expected results under PPP in the program.

a) Having key supportive policy changes implemented as necessary
b) Having the co-packaged ORS and zinc and amoxicillin DT readily available
Public-Private Partnership Initiatives Implemented in Tanzania

The MOHSW, the lead implementing partner of the program in Tanzania actively involved other partners in the private sector as described below.

**a. Accredited Drug Dispensing Outlets (ADDO)**

The ADDOs, are an initiative led by the Pharmacy Council with technical assistance from the Management Sciences for Health (MSH) to train and licence small, privately operated retail outlets in rural and poor areas to sell a pre-approved list of essential medicines including prescription of drugs. The main objective of the ADDO program is to increase availability and accessibility of key essential medicines in rural areas, which are often out of stock at government health facilities. Initially the ADDO medicines list included Amoxicillin syrup, Zinc and ORS as separate drugs. However, in order to ensure the new diarrhea and pneumonia treatment formulations penetrated the private sector, the MOHSW in collaboration with UNICEF and UNFPA held a successful sensitization meeting in 2015 to include Amoxicillin 250mg DT, Zinc/ORS Co-Packs and other family planning lifesaving commodities to be included in the ADDO list.

It was noted that MSH was planning to work through ADDOs to improve community access and awareness to these new products (Amoxicillin 250mg DT, Zinc/ORS Co-packs) to treat childhood pneumonia and diarrhea. They would provide trainings, technical follow up and monitor the utilization of the new products. The coverage area was indicated as being the UNICEF supported districts where about 700 ADDOs would be covered in Mbeya, Iringa and Njombe regions.

**b. Private pharmacies**

As indicated in the preceding sections, UNICEF procured commodities only for the public sector. However, since the beginning of the project, UNICEF had been working collaboratively with the local private Pharmaceutical Companies and suppliers of Zinc/ORS Co-packs and Amoxicillin 250 mg DT. Several meetings and communications were reported as having taken place to inform them about upcoming activities, which would ultimately create demand of the recommended essential medicines.
Effectiveness of the Public-Private Partnerships Implemented

From findings of the evaluation and as discussed in the preceding sections, a number of results were realized through public-private partnerships (PPP). In demand generation for instance, a number of private organizations were reported to have partnered with the Ministry of Health not only in the planning phases of the demand generation activities, but also in their execution as shown below.

“As a ministry we have so many stakeholders whom we are collaborating with in preparing the program such as WHO, UNICEF and not helping us with writing the roadmap only but they help with printing and distributing in many areas and people who need those guidelines for example stakeholders such as Global fund, world Vision, URS and many other organizations of which we collaborate in facilitating MCI which not only deals with Pneumonia and diarrhoea but all the diseases facing infants.” Ministry of Health, Child Health in charge

“In the training sessions that targeted frontline health workers also, a collaborative approach was adopted during the main classroom sessions as well as the follow-up supervision visits that were aimed at addressing existing knowledge gaps.”

“There is MSH… but, we cooperated and provided education to ADO shops. In the training we had with us people from private sectors, we involved paediatric association which participated well in encouraging the public. We also involved Private Hospitals association and Institute for Medical Research. We agreed that private hospitals should work under the given guidelines as usual and in supervision, the ministry comes about although they have their own procedures. There are some people from Salama pharmacy who had already begun the production for orals; we were also in close proximity with medicine professionals and people from paediatric association” C4D Coordination Manager.

In addition to that, through close collaboration with the Ministry of Health and relevant bodies, the recommended medicines for the treatment of diarrhoea and pneumonia were registered and procured for distribution. As discussed in the supply management section above, the government is working closely with the private sector to ensure their continued availability after the program ends.

Efficiency of the Public Private Partnership Initiatives

Through the involvement of the private sector, potential main suppliers for Amoxicillin DT were identified(Moraf pharmacy and Salama pharmaceuticals, and for Zinc/ORS Co-packs is Shelys pharmaceuticals). Immediately after registration, both suppliers of Amoxicillin DT were reported to have imported the medicine and distributed them to the private pharmacies. This would supplement the efforts that were being made through the public sector.
In addition to that, findings from the evaluation indicated that MSH had planned to have sensitization meetings with the large regional suppliers in Mbeya, Iringa and Njombe regions to order diarrhea and pneumonia commodities from the national suppliers to ensure availability of these products to the ADDOs.

Also, and in regards to the dIMCI training that was implemented for frontline health workers, the government was able to mobilize a GFATM (Global Fund) grant as well as other partners such as World Vision, Tibu Homa (URC/USAID) and EGPAF through PPP to support this initiative. This resulted in more coverage of the training (23 districts) in addition to the six districts covered through the DFATD funding.

**Sustainability of the Public Private Partnership Initiatives Implemented**

Though there were key achievements made through PPP, findings from the evaluation indicated that more efforts to encourage PPP were needed. Coordination among the MoHSW and the partners were indicated as not functioning well; national policies and programs were reported as not being shared with everyone involved for more informed efforts. In addition to that, activities related to diarrhoea and pneumonia implemented by other NGOs were reported as not being shared widely. Possibilities therefore existed of duplicating efforts. UNICEF reported having repeatedly requested for the formation of a national diarrhoea and pneumonia-working group for more coordinated and consolidated efforts but this was yet to be honoured.
6.3 Focus on Ethiopia

6.3.1 Current Programming in Ethiopia

According to the Africa Health Observatory, Ethiopia is reported to have an infant mortality rate is 59 deaths per 1000 live births - with an estimated child mortality rate of 31 deaths per 1000 children surviving to 12 months of age, while the overall under-five mortality rate is 88 deaths per 1000 live births.\(^8\) They add that 67% of all deaths in children aged less than 5 years in Ethiopia take place before the child’s first birthday and are mainly caused by malaria, pneumonia, diarrhoea and nutrition deficiencies are among the major causes of child mortality. According to the Centre for Disease Control\(^9\), the top two leading causes of death in Ethiopia are lower respiratory infection (10%) and diarrheal diseases (8%). Thus, Ethiopia is one of the countries in the world facing the most burden from diarrhoea and pneumonia and action was needed.

Ethiopia obtained funding worth USD 4,467,441 for the implementation of this program that was interested in finding solutions to the problems caused by pneumonia and diarrhoea. As with the other countries, Ethiopia was tasked with the same responsibilities of generating demand for these essential commodities used for the treatment of pneumonia and diarrhoea, improving service delivery, targeting supplies management and finally, engaging in public private partnerships to support the process of reducing morbidity and mortality from pneumonia and diarrhoea. Before embarking on the results of this external evaluation, it would be prudent to look at the background with which Ethiopia was implementing this project.

The health sector is managed in a decentralised manner where Regional Health Bureaus oversee how care is delivered in each service area, adapting approaches as needed for reasons of geography or population density. As such, Health Extension Workers are predominant in the communities providing care under a model that was created under the principle that if the right health knowledge and skill is transferred, households can take responsibility for producing and maintaining their own health.

\(^8\)http://www.aho.afro.who.int/profiles_information/index.php/Ethiopia:Analytical_summary_-_Child_and_adolescent_health
Thus, it is worth noting that this project thus came amidst Ethiopia’s national scaling up of iCCM and critically helped to consolidate iCCM in over 200 woredas and helped to engage the same approach in other areas as well. Overall, this project is implemented in over 200 woredas in 23 zones of Oromia, SNNPR, Amhara and Tigray regions. A third of these were said to have been rural woredas in Ethiopia. The areas were selected based on contribution to national mortality and morbidity; agrarian society and drought prone.

"Excluding the pastoralist areas, agrarian regions were the initial places the program started to be implemented." UNICEF Siaya County Project Coordinator, IDI

It supported more than 5,101 health posts across the four regions, benefiting an estimated 31,021,899 people and 4,418,317 children under the age of five. In total, it targeted 25 million people out of which 4 million were children under the age of 5 years. Out of this, the project documentation records that an estimated 1 million under-five children benefited from iCCM in the project period. Under this program, it was said that over 10,000 HEW were trained with emphasis to the updated protocol of case management of diarrhoea and pneumonia.

Based on the focus areas that the project was tasked with, this report has been presented according to these thematic areas as listed below:

a. Demand Generation
b. Improving Service Delivery
c. Supply Management
d. Public-Private Partnerships

Each of these items will be evaluated and presented in this report based on OECD guidelines of relevance, effectiveness, efficiency and sustainability.

**6.3.2 Demand Generation – Communication for Development**

Demand generation was targeted at the caregivers of children under 5 years as well as their families. This component needed to increase public awareness and generate demand for appropriate diarrhoea and pneumonia care seeking among providers and caregivers of children under five years old.
The Need for the Demand Generation Activities

The demand generation component was an important component for this program based on the assumption that increases in the levels of knowledge, positive improvements in the attitudes and opinion would create demand for services; which ultimately, would lead to a reduction in morbidity and mortality. Demand generation was necessary to create an environment that encourages individuals, families, and communities to act positively for their health and to access and advocate for quality health services.

It was important first to understand the context in which the program was operating in. In terms of the household dynamics, it appears that decision making especially on financial issues is a joint decision in the household. This is observed in 46% of the households where caregivers of children under 5 years were interviews and more prominent in Amhara (60%) and Oromia (53%). In SNNP and Tigray, decision-making is predominantly a male decision.

That notwithstanding, the care giving role in the household is predominantly a female responsibility in the household. Out of 386 households interviewed, all the caregivers were female and this is evident in the findings from the key informant interviews.

“Most of care givers that come to health posts are mothers.” Nutrition and Children Health Affairs Health Centre and Health Post Supervisor

“The caregivers are mostly Mothers. Mothers don’t go out of their house and they are the one who takes care of their children.” HEW SNNP Region

In these regions, 33% of the caregivers indicated that their children had suffered from diarrhoea within the last three months preceding the study. No regional variances were observed in these incidences of diarrhoea.
However, treating these incidences of diarrhoea has not always been easy and thus this program. It was apparent that in the past, caregivers did not consider diarrhoea as a serious illness that deserves medical attention.

“…most are not treated through ORS and Zinc because the caregivers don’t take the illness seriously. They become cautious and go to health facility only when the case becomes severe.” **ICCM Advisor JSI**

Issues around cultural beliefs and opinions have been prevalent where the caregivers believed that decreasing the amount of food intake would stop the diarrhoea.

“A cultural belief by the community even in urban areas for instance “decreasing amount of food intake will stop the diarrhoea” is another barrier we face.” **ICCM Advisor JSI**

“The problem in this locality is related to cultural belief that the caregivers don’t allow their children to go to health post/centre without being baptized or use holy water. We also face people, though limited, who live in a difficult geographical location (those who live in mountain areas) become negligent in bringing their children to health facilities.” **Nutrition and Children Health Affairs Health Centre and Health Post Supervisor**

“Those in the rural part actually go the local healers first. That is their first option. They come here when the local healers fail them.” **Project Coordinator for JSI L10K IMNCI Program**

Issues were also observed with the distance to health facilities; an issue that tended to affect care seeking behaviour.

“…we still encounter patients who still far places to locate health centres. We have conducted a study for the justification and the main one was unavailability of the health posts. For different reasons these health posts were found closed. Failure by the health extension workers to inform the community about the ICCM prevention program is the second reason.” **ICCM Advisor JSI**

Then there was an issue where compliance to treatments was recorded as low and which was exacerbated by non-compliance by health professionals themselves in drug prescriptions.
“Mostly patients even health professionals don’t tend to use prescribed medicines as suggested in the direction of usage. A patient may skip one tablet when prescribed to use three in a day. Negligence when we see our health condition improving is prevalent in most of us behaviour. In order to avoid this and reach successful pneumonia treatment, we included continuous follow up strategy so that they can finish their medication fully.” ICCM Advisor JSI

Further, there is low care seeking behaviour driven to an extent by low awareness about childhood illnesses as well as parental negligence.

“The second thing is from the demand side; there is awareness gap about health problems of children under the age of 5. The care seeking behaviour of the society is low, i.e. taking the child to the health facility immediately when she/he has cough, fever, diarrhoea is still backward. Because of this, the number of children who come for treatment yearly is very low from the number of children expected to have diarrhoea episode.” CBNC SNNPR Regional Coordinator PSI

“Caregivers don’t immediately take them to the health facility.” CBNC SNNPR Regional Coordinator PSI

“Lack of information and negligence of care givers to seek treatment was a challenge that we faced during the initiation of the program.” Project Coordinator for JSI L10K IMNCI Program

“Due to lack of awareness, some mothers say that, we were also grown without such kind of care and why is it a problem now? Hence, I smoothly explain and teach her the diseases that may happen to the child like diarrhoea and the like.” HEW SNNP Region

This awareness and low care seeking behaviour is father compounded by the male attitude towards childcare in these communities as well as the issue of polygamy, which strains the resources of the household.

“There are some challenges. The males do not like it. We do not train all of them the same way... We also teach the males to care and not to give a lot of burden to their wife… There are economically very poor people.” HEWs Supervisor

“Most of the time, it is the mother who shoulders most of the burden. Husbands usually have two wives so they care relatively less for children in general terms.” HEW Oromia Region

Then there are issues of families disintegrating after divorce, which in turn affects the kind of care that the affected children are able to get.

“Moreover, when there is a divorce, a child mostly stays with the mother. However, the behaviour of the mother changes when she gets divorced and she doesn’t seriously follow up her child”. HEWs Supervisor

That however is not all, as the issue of child spacing and family equally emerged as one of the compounding factors because the mothers with this burden of taking care of the young ones rarely have time to take care of them well and address their health needs.
“Some mothers give birth to children without enough intervals between the children. That is a big burden on the mothers to care well for all their children. Due to this lack of proper attention from their parents’ children easily get exposed to diseases.” **HEW Oromia Region**

Then finally was the issue that pneumonia was not considered a serious matter by the communities to warrant medical attention.

“Before the program was started, the problem, especially with pneumonia, was not considered as a serious matter among the community. As to the information obtained from an interview, many cases of pneumonia did not get medical treatment as result of different reasons including lack of awareness and shortage of finance to buy medicines.” **Pharmaceutical Logistic Management MOH**

Thus, it is clear that the program implementers had many awareness issues to address which were intended to result in care seeking behaviour. Details of these awareness creation activities that were implemented are well elaborated in the next subsection.

**Demand Generation Activities Implemented Under the Program**

This demand generation component had various tasks attached to it. The first was to create a media awareness panel that needed to steer discussions involving concerned stakeholders. It was confirmed that a media awareness panel was done through the Ethiopia Broadcasting Corporation (EBC) television involving six experts drawn from the Federal Ministry of Health (FMOH), UNICEF, SCI, JSI/L10K. Further, the program needed to produce and disseminate advocacy material and creative briefs on diarrhoea and pneumonia.

“Panel discussions transmitted in Ethiopian Broadcasting Agency were another approach to communicate the lowest level. Panel discussions related to children health problems, what has been done so far and things to be done in the future to curb the problems.” **UNICEF Siaya County Project Coordinator, IDI Transcript**

Indeed, the evaluation team was able to see the creative material that was prepared under this piece. In total, 500 iCCM advocacy briefs were printed and distributed to sensitize the Regional Health Bureaus (RHBs), Zonal Health Departments (ZHDs) and Woreda health officials. The main reason for this was to garner ownership in the program for a higher impact.

“The main thing is making the political leadership or political system aware of it…this helps it make a decision to cascade it down to the lower levels.” **Technical Advisor for Child Health at the Federal Minister of Health, Maternal and Child Health Directorate**

The advocacy briefs included information on current national iCCM implementation (on pneumonia and diarrhoea), major bottlenecks and action needed. Additionally, under this
component was the responsibility to support special communications strategies during Child Health Days and supplementary immunization campaigns and provide support to the national media campaigns. Under this, special communications strategies were adopted during these days at national, regional and Woreda level with UNICEF as well as with its implementing partners.

Further, the program was required to adapt IEC/BCC material, print these and distribute these to the project areas. It can be confirmed that a national IEC-BCC (Family Health Guidelines – FHG) tool was revised to include updates on diarrhoea management using ORS and Zinc. Birth registration information was also included in addition to information to promote care-seeking behaviour around ORS and Zinc. In total, 331,000 revised FHGs were printed and distributed in the project areas.

Review and sensitisation meetings were also conducted to enhance the health extension workers (HEW) capacity to effectively work with the Health Development Army (HDAs) on the danger signs recognition and prompt care seeking.

"Health development army (HDA) is an approach initiated in Tigray region…it is a one to five approach where there are a number of influential people scattered in different Kebeles. The HEWs will train and communicate key messages from the training they receive & their own personal experience to these people on different issues like family planning, child health or other programs…this is because two HEWs are expected to reach 5000 people, which is difficult, hence training this group of people is a necessity to reach the community. Moreover, it is cost effective because the HDAs are volunteers. Community/ religious leaders and university teachers are also made to participate in order to influence the society." ICCM Advisor JSI

"There is mobilization work being done on market days to let people know about the services. In addition to that, and as I said, the Health Development Army (HDA) is the wider platform for this activity. Health Extension Workers work with Health Development Army (HDA) to give continuous information on what services the health extension workers provide." Technical Advisor for Child Health at the Federal Minister of Health, Maternal and Child Health Directorate

Under this, performance review and refresher training was conducted for over 10,300 HEWs and HEW supervisors to enhance their capacity to effectively work with HDAs on danger signs recognition and promoting prompt care seeking.

Finally, the program was responsible to disseminating on radio, messages on pneumonia and diarrhoea disease danger signs. The evaluation team saw the radio messages that were created and information was shared that 188 radio spots in two local languages were aired on pneumonia
and diarrhoea danger signs and the needed action. These were aired on EBC and Fana BC in addition to Oromia TV and Radio organisation.

The Effectiveness of the Demand Generation Activities

Based on these activities, it was anticipated that the levels of awareness and care seeking behaviour around diarrhoea and pneumonia would improve and this was assessed by the external evaluation team. The following was observed:

a. Increase in the Level of Awareness for these Diseases

It emerged that 52% of the households have obtained information on disease management for their children under the age of 5 years.

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<table>
<thead>
<tr>
<th>Region</th>
<th>Frontline health worker/community health worker</th>
<th>Doctor/nurse/clinical officer</th>
<th>Television</th>
<th>Friends/family/neighbours</th>
<th>Radio</th>
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<td>Total(386)</td>
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</tr>
<tr>
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<td>34%</td>
<td>12%</td>
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<td>8%</td>
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<td>OROMIA(95)</td>
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<td>45%</td>
<td>16%</td>
<td>9%</td>
<td>4%</td>
</tr>
<tr>
<td>SNNP(117)</td>
<td>60%</td>
<td>16%</td>
<td>9%</td>
<td>12%</td>
<td>8%</td>
</tr>
<tr>
<td>TIGRAY(61)</td>
<td>57%</td>
<td>38%</td>
<td>8%</td>
<td>12%</td>
<td>8%</td>
</tr>
</tbody>
</table>
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This state of affairs was confirmed in the key informant interviews who reported that the caregivers were targeted for additional training on childhood diseases and nutrition.

“Normally caregivers seek service from health facilities specially health post...Every time they came for treatment they are given lesson on the severe signs of the disease. Further education on household treatment is done by the HEWs during the home visit. HEWs give thorough lesson on a household to household basis on issues of pregnancy, risks and care needed for post-natal pregnancy phase and I think more work needs to be introduced for treatment of children too.” Nutrition and Children Health Affairs Health Centre and Health Post Supervisor

“I transfer the knowledge that I have gained down to the community. Then they implement it and participate in reduction of the occurrence of diarrhoea.” HEW SNNP Region

It is not therefore a surprise that from these sources of information, the caregivers trust the frontline workers (47%) and the doctors, medical officers and nurses in public facilities (35%) more than they trust any other source of information.
Roughly 67% of the caregivers mentioned that they had ever gotten information about the danger signs of and appropriate treatment for diarrhoea.

This information on the danger signs of and appropriate treatment for diarrhoea was mentioned as having been obtained from a frontline health worker in 58% of the instances, and from a doctor, nurse or clinical officer in 47% of the instances. It appears that the caregivers are able to obtain information from a variety of sources.
With pneumonia on the other hand, approximately 35% of the caregivers mentioned that they have ever gotten information about danger signs of and appropriate treatment for pneumonia.

The source of this information on the appropriate treatment for pneumonia was from a frontline health worker in 61% of the instances. In Oromia, this information was predominantly obtained from a doctor, nurse or a clinical officer.

In summary, while the level of awareness on certain issues was not completely striking, the key informants who are program implementers did agree that some improvements had been observed in recent years.
"The awareness of caregivers about this disease is now getting better. However, still some are keeping their kids at home longer by thinking that it is a simple cough. They do not bring their kids immediately to health centre just as they do for diarrhoea. However, there is an improvement after we told them to bring their kids to medical attention if they observe increased rate of breathing." HEW Oromia Region

All the same, many additional awareness creation activities may be required to result in improvements in care seeking behaviour.

b. Improvements in Care Seeking Behaviour

As mentioned in the previous chapter, it was observed that 33% of the caregivers mentioned that their child/children had suffered from diarrhoea within the last three months.

<table>
<thead>
<tr>
<th>Region</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total (386)</td>
<td>67%</td>
<td>33%</td>
</tr>
<tr>
<td>AMHARA (113)</td>
<td>67%</td>
<td>33%</td>
</tr>
<tr>
<td>OROMIA (95)</td>
<td>63%</td>
<td>37%</td>
</tr>
<tr>
<td>SNNP (117)</td>
<td>70%</td>
<td>30%</td>
</tr>
<tr>
<td>TIGRAY (61)</td>
<td>66%</td>
<td>34%</td>
</tr>
</tbody>
</table>

It also appears that when these caregivers first realised that their child had diarrhoea, 47% of these took the child to a health facility. What is however worrying is that about 12% did not do anything but rather, decided to wait and see what would happen; and this figure was highest in SNNP and Oromia as shown below.
For the few that mentioned they would wait and see, it is worthwhile to note that around 64% decided to wait more than a day before seeking help.

The evaluation team sought to find out whether the caregivers could articulate the things to look out for to judge whether the diarrhoea their child was suffering from was mild or serious and it emerged that 34% of the caregivers identify with how watery the stool is, 22% identify with how frequent the bowel movement are, while 13% identify with the fact that the child is vomiting or has a fever. Fewer caregivers could identify with shrivelled skin or sunken and hollow eyes.
With pneumonia on the other hand, only about 30% of the caregivers identified fast/difficult breathing while 13% mentioned chest in-drawing as danger signs for which they are required to seek immediate medical attention for their child under the age of 5 years.

Out of these, only 31% of the caregivers mentioned that their child had an episode of pneumonia in the last 1 year.
Out of these, 61% sought medical attention immediately, though there are 16% that waited for a few hours before seeking medical attention, 15% waited for a day or two before seeking medical attention while 7% waited longer than 2 days but not more than a week before seeking medical attention.

For the portion that did not seek medical attention - majority of these mentioned that they used local home remedies. All the same, the key sector players are of the opinion that care-seeking behaviour has seen some improvements.

From these findings, it is evident that care-seeking behaviour varies from condition to condition. It appeared that caregivers are more likely to seek medical attention in the event of pneumonia.
than diarrhoea. All in all, the key informant interviewed for this study mentioned that they had observed increases in the number of patients that are treated in health centres and posts from the moment the iCCM program was launched.

“I am aware that number of patients treated in the health centres and posts has increased the moment the iCCM program was launched...And with the recent years the number of patients treated at health posts is greater in number than patients going to health centres.” iCCM Advisor JSI

“I would say yes it brought about change. For example, on the issue of sharing responsibilities for household chores, there is change now. Men usually say this is women's job. I think the education is bringing change in their attitude now.” HEW Oromia Region

This thus goes to display the power of communication in addressing health issues.

c. **Improvements in the Awareness of Products Used to Manage these Diseases**

The study also sought to understand what products the caregivers were aware of, that are used for the treatment of diarrhoea in children under the age of five. It emerged that 85% are aware of ORS, but less than 20% are aware of Zinc or the ORS/Zinc co-pack. Nevertheless, awareness of the ORS/Zinc co-pack was highest in Oromia (29%) and SNNP (26%).

![Bar chart showing awareness of products used for diarrhoea in children under 5 years](chart)

Just about 60% of the caregivers got to know about ORS from a doctor, medical officer or nurse in a public health facility. On the other hand, 44% in total mentioned that they got to know about the product from a frontline health worker – especially in Amhara and Tigray where they were mentioned more.
These got to know about ORS more than 3 years ago, signifying that there were efforts that were happening prior to the program that led to this level of awareness about the product.

Knowledge about zinc on the other hand was obtained from similar sources as with ORS where doctors, medical officers and nurses in public health facilities were mainly mentioned together with frontline health workers. With zinc interesting trend was observed where 36% of the caregivers cited media advertisements as the source of this information, and predominantly so in Amhara, Tigray and SNNP regions.
We observed that for zinc, as compared to ORS, majority of the caregivers mentioned that they became aware of the product in the last one year.

With the ORS/Zinc co-pack on the other hand, information about these was obtained from a doctor, medical officer or nurse in a public health facility (62%), as well as from media advertisements (29%) as well as front a frontline health worker (19%).
For the ORS/Zinc co-pack, more than 50% of the caregivers got to know about this product in the last one year, with the exception of Oromia.

In terms of product usage for the management of diarrhoea in children under the age of 5 years, it was observed that 78% of the caregivers mentioned ORS, 9% MENTIONED the ORS/Zinc co-pack, while 6% mentioned zinc. It is worth noting that 20% of the caregivers mentioned that they had never used any of these products.
From the above, it is evident that the use of ORS/Zinc co-pack was recorded more in Oromia and in SNNP. In terms of the duration of time it has been since they started using ORS, 44% of the caregivers mentioned that this was over three years ago and thus the program can be attributed to have contributed to this.

Its use is driven by the fact that children respond faster to treatment as mentioned by 78% of the caregivers that have ever used it. Its dislike is mainly around its taste – which makes it difficult to giver to children.
Most caregivers on the other hand started using zinc within the last two years and this is consistent across the regions.

Most of the caregivers like the fact that children respond better to treatment (70%) and dislike it for its taste and issues on its availability.
It appears that most of these started using the ORS/Zinc co-pack within the last one year.

<table>
<thead>
<tr>
<th>Region</th>
<th>Total(20)</th>
<th>AMHARA(4)</th>
<th>OROMIA(4)</th>
<th>SNNP(5)</th>
<th>TIGRAY(7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>What do you like about the Zinc?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It causes no side effects</td>
<td>10%</td>
<td>100%</td>
<td>50%</td>
<td>20%</td>
<td>14%</td>
</tr>
<tr>
<td>Tastes good</td>
<td>70%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children respond faster to treatment</td>
<td></td>
<td>50%</td>
<td>40%</td>
<td></td>
<td>86%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Region</th>
<th>Total(20)</th>
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<th>OROMIA(4)</th>
<th>SNNP(5)</th>
<th>TIGRAY(7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>What don’t you like about Zinc?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has a bad taste</td>
<td>75%</td>
<td>50%</td>
<td>100%</td>
<td>80%</td>
<td>71%</td>
</tr>
<tr>
<td>It is not readily available</td>
<td>15%</td>
<td>50%</td>
<td></td>
<td>20%</td>
<td>29%</td>
</tr>
<tr>
<td>Not Applicable</td>
<td></td>
<td></td>
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</tbody>
</table>

These caregivers prefer the ORS/Zinc co-pack for the fact that their children respond faster to treatment and dislike it for its taste – issues that are consistent with those mentioned for the loose products.
In terms of the products that the caregivers are aware of that are used for the treatment of pneumonia in children under 5 years, only 20% of the caregivers mentioned Amoxil. About 58% of the caregivers do not know any product used to treat pneumonia in children under the age of 5 years.

The caregivers that are aware of Amoxil got to know about it mainly from medical professionals in a public health facility as well as from the frontline health workers.
About 54% of the caregivers got to know about Amoxil over 3 years ago, way beyond the time the program began to be implemented.

These caregivers started using it over the same period – 3 years ago. Major likes for Amoxil is that the children respond faster to treatment (76%) while the major issue with this product is that it is expensive and has side effects (both at 15%).
Obviously, these barriers would need to be reviewed in future programs.

**Efficiency of the Demand Generation Activities in Ethiopia**

This program seemed to have operated efficiently with regard to the demand generation component. Concerning the media awareness panel, it appears that a well-constituted panel was formed to assist create awareness; that comprised of various partners that are interested in the subject in Ethiopia. By including all these, the media briefs created were said to have been appropriate for the target audiences and were able to garner the governments in the distribution of the 500 advocacy briefs to the Regional Health Bureaus (RHBs), Zonal Health Departments (ZHDs) and Woreda health officials.

Further, the program was able to obtain the governments support for the subject to be covered during the Child Health Days and was able to ride on the supplementary immunisation campaigns as well as other national media campaigns.

Further, the program able to adapt IEC/BCC material, print these and distribute these to the project areas. It was confirmed that a national IEC-BCC (Family Health Guidelines – FHG) tool was revised to include updates on diarrhoea management using ORS and Zinc. Birth registration information was also included in addition to information to promote care-seeking behaviour around ORS and Zinc. In total, 331,000 revised FHGs were printed and distributed in the project areas.
While Ethiopia had been running iCCM, the program was able to provide a platform under which review and sensitisation meetings were also conducted to enhance the health extension workers (HEW) capacity to effectively work with the Health Development Armies (HDAs)\(^\text{10}\) on the danger signs recognition and prompt care seeking. Under this, the program was able to achieve performance reviews and refresher training for over 10,300 HEWs and HEW supervisors to enhance their capacity to effectively work with HDAs on danger signs recognition and promoting prompt care seeking.

Finally, the program was responsible to disseminating on radio, messages on pneumonia and diarrhoea disease danger signs. With the radio messages that the evaluation team created and shared, and which were aired in 188 radio spots in two local languages, and on pneumonia and diarrhoea danger signs and the needed action, the program was able to achieve some level of awareness on these diseases, improve to an extent the level of care seeking behaviour, as well as improve awareness on the products used to manage these diseases and especially on zinc and the ORS/Zinc co-pack.

**Sustainability of the Demand Generation Activities in Ethiopia**

As noted earlier, the demand generation activities were implemented in a multifaceted manner. It appears that most of the activities, especially the ones that rode on the existing iCCM would be sustainable in the end. However, for the activities that were implemented, and in which UNICEF provided the funding and the direction, such as the media campaigns might not be sustainable in the end, yet these were observed as having some impact in generating demand. However, the demand generated can only be sustained under the following conditions:

**a. Care Seeking Behaviour and Service Utilisation Appears Low**

The impact of the frontline health workers in reaching the households looks limited. From the findings, it is evident that quite a significant proportion of the caregivers are not able to identify

\(^{10}\)Information defines these as volunteer community health promoters who train model families to implement health initiatives and to serve as role models or graduated households showing benefits to their village. They are used in educating the communities where they link one model family to five other households.
the danger signs of both pneumonia and diarrhoea to look out for. Further, it appears that the level of awareness for ORS/Zinc co-pack, Zinc and Amoxil DT is very low.

*If the health post is not open when a mother comes there, seeking a medical care, she will return and not come again; she also tells others not to go to the health post. CBNC SNNPR Regional Coordinator PSI*

b. **Need for male caregiver targeted programs**

As with the other countries, male caregivers seem drawn away from the care of their young children, yet, are key decision makers in the households together with their spouses. Thus, it is important to tailor male-targeted programs to change their attitude towards childcare. With this program, it appears that they were not interested in the training but were an important component in the program.

“There are some challenges. The males do not like it. We do not train all of them the same way... We also teach the males to care and not to give a lot of burden to their wife.” *HEWs Supervisor*

c. **Challenges with HEWs workload to sustain and drive demand for the treatment of pneumonia and diarrhoea.**

It also appears that the impact of the frontline health workers in passing on the information to the households is still low, especially for targeted programs. It appears that they are required to pass a lot of information to the households and thus are not able to adequately address a subject. This might need to be complimented with another approach in the future, as overreliance on this approach might not yield the expected results. Further, it appears that they are overburdened with responsibilities and this might be affecting their efforts towards awareness creation.

“HEWs are burdened with workload; the caregivers may face difficulty in accessing the health posts at any time. The HEWs are sometimes forced to close the health post while rounding house to house visits within the community.” *UNICEF Siaya County Project Coordinator, IDI*

d. **Media campaigns seemed to have an impact, but these seemed to have been funded by UNICEF**

Most of the caregivers cited media campaigns as their source of information on the danger signs to look out for, for pneumonia and diarrhoea, as well as the treatment options. This seemed to have a significant impact, especially because these were in the local languages. It also appears that most of these were driven and funded by UNICEF and thus would not continue without
additional funding. There is need to pursue a sustainable funding model for these media campaigns.

e. **Awareness on pneumonia danger signs and treatment options is still low**

The level of awareness on pneumonia is extremely low and most of the information that most caregivers cited was information they learnt over 3 years ago. It appears that the levels of awareness even for the treatment options is still low and a proportion of the caregivers still use local traditional remedies for this, or wait for long before seeking treatment for their child under the age of 5 years. It appears that additional effort and funding may be required to develop a strategy for pneumonia.

### 6.3.3 Improving Service Delivery in Ethiopia

The service delivery component was targeted at the providers of health care services in Ethiopia.

**The Need for the Service Delivery Component**

The caregivers and other community members face various challenges in accessing healthcare. 19% of the caregivers mentioned that they lack money for treatment, 10% cited the lack of proper medication, 9% cited the lack of awareness concerning modern health matters while 3% cited congestion in health facilities was a challenge and this resulted in delayed services.

<table>
<thead>
<tr>
<th>Region</th>
<th>Lack of money for treatment</th>
<th>Lack of proper medication</th>
<th>Lack of awareness concerning modern health matters</th>
<th>Congestion in health facilities resulted in delayed services</th>
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<td>AMHARA(113)</td>
<td>9%</td>
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<td>3%</td>
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<td>TIGRAY(61)</td>
<td>8%</td>
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<td>5%</td>
<td>3%</td>
</tr>
</tbody>
</table>

The same challenges were observed with regard to the ability of other community members being able to access healthcare services.
The caregivers were of the opinion that these challenges could be improved by creating awareness about diseases and proper hygiene through community forums. Further, it was observed that there is need to provide free services to the community as well as equip health centres with better facilities as well as drugs.

Thus, there was need to strengthen service delivery in Ethiopia to meet the demand generated by the communication campaign as well as the iCCM component. Specifically, this component needed to expand access to effective integrated case management at community and front-line health facility level.

**Activities Conducted Under the Program to Improve Service Delivery**

Various activities were expected to be achieved under this improving service delivery component. The first was the need to update, print and distribute iCCM/IMNCI training guides and job aids that incorporated Amoxil DT as the first line of treatment, as well as the inclusion of
ARI timer for the diagnosis of pneumonia. Incorporation of Amoxil DT as the first line of treatment in the iCCM training guides and job aids was achieved.

“Revision [about Amoxil DT] was made on their iCCM chart booklet starting from 2013; due to this all frontline workers took 4 days training.” ICCM_CBNC SNNPR Regional Coordinator PSI

These iCCM training guides and job aids were then distributed to over 10,000 health extension workers and health workers in the project areas. Further, approximately 5,000 ARI timers were distributed to assist with the diagnosis. Another item that was expected to be achieved under this component was the need to strengthen in-service and pre-service training of frontline health workers on iCCM and IMNCI in addition to strengthening their supervision and mentoring. Under this, it was reported that the capacity of four health science colleges in the regions was enhanced and that a total of 74 tutor and 5,000 HEWs were trained during the program duration.

“Whenever new events and updates were made; we would notify them on the performance and do a refresher training every six months. Secondly, we have a supervision mechanism so that they can improve their skills specially those working at health posts. For this purpose, discussions are conducted together with the health extension workers at the health centres and posts where they will be updated with new information too.” UNICEF Siaya County Project Coordinator, IDI

Further, UNICEF was reported to have provided guides, videos, laminated wall charts and teaching aids at national level. In addition to that, the program was expected to establish and insure the functionality of ORT corners and it was reported that ORT corners were established in 94% of the facilities with adequate equipment and with supervision structures to ensure continued functionality and utilisation.

The program also sought to explore the non-financial incentives to motivate frontline health workers and in doing so, these were reported to have been rewarded with solar radios, recognition in ARM and festivals as well as being afforded the ability to upgrade. Finally, UNICEF was expected to provide support in identifying and sharing best practices on diarrhoea and pneumonia management for which, it organised the annual best practice sharing, performance review and ownership workshops which it supported the implementing partners as well as the federal Ministry of Health in organising.

In this improving service delivery component, we observe that the program had a heavy leaning towards iCCM through frontline health workers (known as Health Extension Workers in Ethiopia), in order to avail healthcare services at the household level.
The role of the frontline health workers or Health Extension Workers as they are known in the Ethiopian context is generally awareness creation and providing primary level of care at the community level. Their primary responsibility is to promote health, including education, screening, prevention, and selective clinical interventions. In Ethiopia, they are attached to health posts and are manned by trained personnel. They are tasked with delivering community level antenatal and post-natal care in their local communities. Their recruitment, training and mode of operation is explained in detail in the subsequent subsections. Thus, due to the importance of the role, they played, and the centrality of this role to this program work, we will explore in detail their structure and operation with regards to this program in the subsections below.

a. Selection of the Frontline Health Workers/Health Extension Workers in Ethiopia

There is at least one health extension worker in every health care unit.

“We have enforced the government to employee at least one health extension worker in every health care unit. We have followed that this diarrhoea treatment initiative is being executed in every health post in our region.”

*Oromiya Region Integrated Community Case Management- Community Based New Born Care Regional Coordinator*

They need to have attained at least a grade 10 education are recruited at the Kebele and Woreda levels to be trained as HEWs.

“The qualification criteria were being female, and who completed grades 10.”

*ICCM AND SBNC Program Senior Specialist Save the Children*

They are selected by the health centre in which they are attached and are drawn from the same area.

“The health centre is the one who assigns them… Both male and female…There can be up to five health posts under each health centre. Hence, five staff will go to the 5 health posts turn by turn, that person can be nurse or health officer.”

*CBNC Coordinator JSI L10K*

“They are selected based on the Kebele they live in. The community members are expected to know the frontline workers from their locality before training them. This is because the HEWs will be able to know who and how to approach for they are aware of their community members…They are expected to be member of the Kebele/ Woreda. They all are female. They should finish secondary high school level. Then they will be expected to train based on the health extension program that incorporates 16 packages for a year. Afterwards, they will integrate with the community and serve...”

*Project Coordinator for JSI L10K IMNCI Program*
Knowledge of local language is an added advantage and is one of the considerations made in their recruitment.

Knowledge of local language is one factor when frontline workers are recruited. We have close interaction since we live in the same area. **HEW SNNP Region**

Another key consideration is that they are female and this is discussed in detail in the subsection below.

b. **Gender of the Frontline Health Workers/Health Extension Workers**

The role of a HEW is a female one and this has been attributed to the governments design for the program. All along, being female was one of the key considerations that were considered in the recruitment exercise. The reason as to why most are female is related to the government’s approach in their recruitment and has been a historical one in nature. However, as most caregivers are female, it is easier accessing their households when the HEW is also female.

“… [Why are the HEWs all female?] I believe it is the government approach of promoting and empowering women”. **Project Coordinator for JSI L10K IMNCI Program**

“All frontline workers in our regions are female and nationally I think all of them are female. The main reason to have all female is that these frontline health workers mostly treat and into contact with women and mothers. And in a traditional society like ours, husbands do not feel good to see a male health worker talking and treating their wives at their house an attended…”**Oromiya Region Integrated Community Case Management- Community Based New Born Care Regional Coordinator**

It was evident thought that while most areas were recruiting all female HEWs; male HEWs are emerging in some areas.

…” Both male and female….” **CBNC Coordinator JSI L10K**

We pursued the subject with the caregivers of children under the age of 5 years and 81% of the caregivers mentioned that the health extension workers are female. A sizeable proportion (19%) however, reported that these are male. The highest proportion of male HEWs mentioned was in Oromia and Tigray regions.
Most people in their communities prefer female HEWs. Male HEWs are more preferred in Tigray and this might be driven by the fact that there are more HEWs there as earlier mentioned.

That notwithstanding, it might be prudent for future programs to consider having more male HEWs to compliment the female HEWs because it was observed that the female category is very fluid and results in high attrition rates. This attrition is caused by the terrain that they need to cover which is considered large for these females.

"The other problem is these frontline health workers have multiple responsibilities and they have divided attention to focus on this diarrhoea treatment. These frontline health workers do vaccinations and do their regular job. And our project requires them for the pneumonia and diarrhoea treatment…They do not follow the national guidelines for the treatment of diarrhoea; they also do not submit their report on diarrhoea treatment even though we have given them similar reporting format we provided to the health stations…since they are female and have to travel wide geographical area…they get tired and what is worse is that they are afraid for their safety. Sometimes a health worker may cross forest and river and this could put her life in danger. The other is these health workers may get pregnant and be challenged to travel long distance to help the community. Besides, these health workers suffer from housing. Because these health stations are built a little bit outside the village, they have to travel in some places an hour or more to the health station and then another hour or two to the community since there is no housing facility inside the health station." - Oromiya Region Integrated Community Case Management- Community Based New Born Care Regional Coordinator
They are also selected at the peak of their reproductive age and thus present their communities with gaps when they have to leave for maternity breaks. Further, they were reported as a category of people that were known to relocate to other areas once they got married.

“The problem we have faced in the past was, a frontline worker may get married to a man living in another Kebele and there were problems to move her to that Kebele. Now such things are compromised to give them a transfer and work in a Kebele they like.... Initially, more than 50% of frontline workers resigned. They totally left their job and change work.”  

**ICCM_CBNC SNNPR Regional Coordinator PSI**

c. **Training of the Frontline Health Workers/Health Extension Workers**

The HEWs primary responsibility is to promote health, including education, screening, prevention, and selective clinical interventions. This training program is run by trained trainers who go through training at national level. These then roll out the training to the health extension workers in the different regions.

“The work is started from Master TOT (Training of Trainers). Master TOT is given at the national level. Then regional TOTs are given to regions, this way rollout trainings are given to the health extension workers. Then, after that, mobilization is the task of health extension workers in collaboration with health centres and Woredas… under health extensions there are HDA (Health Development Army) and Kebele command posts. Therefore, HDA’s have monthly 1 to 5 trainings where HDAs and health extension workers meet. During the training children under the age of 5 is one topic, their treatment and the situation is discussed.”  

**Health Extension Worker Tigray Region**

However, the implementation from the training of trainers did not go immediately to the HEWs, as there was need to generate a wide database of trainers that could implement the same training across different regions.

“Training was given starting from Master TOT; fortunately I was among those who gave the master training. The aim of the master training was to make all regions have similar working procedure. They took Master TOT in two rounds. Then these master trainees gave regional TOT in their regions. Those who took regional TOT gave zonal TOT to zones. Then those who took zonal TOT trained frontline workers. The quality of the training was done in a very cautious way. The training given to the frontline workers was different from how it was done in the past, it was skill and competency based training; the number of the frontline workers who took the training was restricted not to be more than 25 in order to make them well equipped in each and every detail so that they will have the required level of skill and competency; they were trained in different methods like using video show, presentation, wall chart booklet, and photograph booklets. They also practiced at the health centre by assessing and identifying problems of children.  

**ICCM_CBNC SNNPR Regional Coordinator PSI**

The training program was mentioned to last approximately six to ten days in a classroom environment.
“At one time I was trained for 7 days. At another time we were trained at Shire for one month about pneumonia…The training time is short”. **Health Extension Worker Tigray Region**

“Health extension workers take 6 days training and start working on children under the age of 5 to manage diseases that expose them to death and illness. The health extension workers take medicines with them after they get trained and they get re-funded on medicines used”. **CBNC Coordinator JSI L10K**

“But at the beginning we offer a training that lasts from 4-6 days. 4 to 6 weeks after the training, we carry out supportive supervision. On this supportive supervision we focus on each and individual things these frontline health workers do and give them training right at the spot. Then after two months of the first training, we call for a review meeting and on this review meeting, we require frontline health workers to bring their report writing book on which they record the treatment they give to children. We gather from 25-30 frontline health workers at the Woreda health centre and their monitoring and evaluation staffs from the health centres. On this review meeting, we share experience and try to solve the problem these health workers face in their duty station.” **Oromiya Region Integrated Community Case Management- Community Based New Born Care Regional Coordinator.**

“We have got ICCM (Integrated Community Case Management) training when we are about to finish our regular training…I think it was for 10 days…. We took ICCM training, but it is only about CBNC (Community Based Newborn Care). We were trained to treat children below the age of 2 month using Gentamicin and Amoxicillin…. We were trained both about diarrhoea and pneumonia at the same time.” **HEW SNNP Region**

Trained in the regions is conducted in the local languages predominant in those regions.

“They are trained in their local language and they do their activities in the local language.” **Technical Advisor for Child Health at the Federal Minister of Health, Maternal and Child Health Directorate**

This training program is followed up with review meetings where their performance is monitored and corrective action is taken to ensure that they are doing the right thing in their communities. Review meetings are essential for the experience sharing value that they add to a project implementation process.

The training program that these HEWs went through covered specific issues of interest under this program. The HEWs were expected to cascade their training back to their communities by first setting up a community meeting where they would engage their community.

“After we took the training, we called and trained development team and other leaders in the society. Then again, we gathered the whole society and gave strong training; and we started work. On the training we informed them that children under the age of five who used to be treated at the health centre and hospitals could also get treatment at the health post level since this service is started at the health post. We told them to immediately bring their children to the health post when they get sick because they can get treatment in close distance.” **HEW SNNP Region**

“When frontline workers return from ICCM training, first they orient the Kebele administration; i.e. they will tell the Kebele administration that they got training on integrated treatment of pneumonia, diarrhoea, malaria, and malnourished children…Then they are required to hold a public meeting in cooperation with the Kebele administration and to introduce the program in their community. The health frontline workers do
the mobilization work with women’s development team and with the people organized in a structure named 1 to 5.” ICCM_CBNC SNNPR Regional Coordinator PSI

In all the program areas, as well as the rest of the country, the training was done at the same time.

“Awareness was done at the same time. We gave blanket coverage. We gave training, made start up follow up and we did review meeting every six months in all the three zones at the same time.” CBNC Coordinator JSI L10K.

d. **Equipping the Health Workers with Essential Supplies**

The HEWs after training were provided with the essential supplies they needed out to carry out their work. First, they were provided with ORS.

“We mainly give them ORS. To start with, we distribute from 30-50 sachet to every health station. Since our officers visit these health stations every time, we do the transportation of ORS obtained from different sources.” Oromiya Region Integrated Community Case Management- Community Based New Born Care Regional Coordinator

They also got ORS/Zinc co-pack as well as Amoxil DT.

“We get the ORS/Zinc and Amoxicillin DT from health centres. We keep it with us and inform the community to bring their children to the health post when they have cough, pneumonia and diarrhoea. We informed them that the treatment is free. They bring their children, they get treated and cured.” HEW SNNP Region

e. **Responsibilities Assigned to a Frontline Health Worker/Health Extension Workers**

In their communities, these HEWs were tasked with the role of reaching out to the caregivers to teach and create awareness in their communities.

“In order to reach the care givers the HEWs work together with HDA and WDA. Every mother in a household is made to group either with one to five or one to thirty grouping. The HEWs has the responsibility to contact these groups every two weeks or every month so that they can teach and create awareness among the community.” UNICEF Siaya County Project Coordinator, IDI Transcript

In doing so, they cover a variety of issues from issues around pregnancy, to childcare, to vaccinations.

“HEWs give thorough lesson on household basis on issue of pregnancy, risks and care needed for post-natal pregnancy phase and I think more work need to be introduced for treatment of children too.” Nutrition and Children Health Affairs Health Centre and Health Post Supervisor
“I give them vaccine [for pneumonia] and teach them to seek treatment when their children are sick. Moreover, I tell them that they can get the treatment in close distance at the health post.” HEW SNNP Region

These awareness creation exercises to the community members by HEWs are conducted approximately twice per week and take place in schools and other social gatherings.

“I teach them about twice per week. I teach at schools and in all places that people get together. It does not have any definite time. We do it whenever there is an opportunity to do so.” HEW Oromia Region

They are also critical to training Health Extension workers (HDAs) in their communities and use them to identify a model household to link it to other five households where awareness creation can take place.

“… health extension workers work with HDAs. They are networked with 1 to 5 system and they take training accordingly. They have family health guide and based on that the health extension workers train them and they cascade it to those found under them…They have trainings every year. There is a record on what topic HDAs got trainings; there are 12 topics they take training on. This year they will take ANC (Antenatal Care), Delivery, Postnatal, essential new-born care, children under 5 cares and similarly, they will take other topics the coming year….The training is once in a month for one day and on one topic.” Health Extension Worker Tigray Region

The process of training the HDAs is well structured and guided by a family health guide. They are required to record what the HDAs were taught and are required to cover 12 topics.

f. Supervision and Support for the Frontline Health Workers/Health Extension Workers

The HEWs also are supervised in a structured manner. It was observed that they are linked to a HEWs Supervisor who is assigned a number of health centres to track.

“My role is working on prevention activities. There are six health centres and we are working on disease prevention activities. Therefore, my role is supervising these six health centres… All areas are targeted but areas that are far are more targeted. For example, areas found on border of Amhara region like “Aduwesen” is more targeted.” HEWs Supervisor

For 5 years. After the ICCM is started there is always review meeting, supervision, follow up and training. CBNC Coordinator JSI L10K

Health professionals from the health centre were also said to attend these supervision visits in addition to the HEWs Supervisor.

[Who carries out these supervision visits] …health professionals from the health centre. There are about 25 health posts in this cluster and since there is scarcity of health professionals, they visit us not very often. Sometimes people from the ministry of health also give us a visit. HEW SNNP Region
Often, the **HEWs Supervisor** will check the caseload of what the HEW has attended to as well as review the quality of service. They hold review meetings where experiences are shared and lessons learnt.

> “What we check is the case load and the quality of service. We have review meeting and they will come there with their notebooks. We also take it like experience sharing session because some health extension workers perform excellent, others perform average and some perform low. We check the reasons for having low and good performance, and they will share their experiences. Excellent performance means, she has created good awareness. Therefore, she will tell how she achieved that.” *CBNC Coordinator JSI L10K*

These review meetings with the **HEWs Supervisor** happen two to three days per week and do a monthly report every 20 days.

> “They visit us 2 – 3 days per week; and once in 20 days for monthly report… They ask us what problems we are facing, what we want for about health of the family and their children.” *HEW Oromia Region*

Sometimes, it also appears that when meetings with HEWs do not happen, they also make calls to support HEWs every week and plan for a face-to-face meeting once a month.

> “They come to our Kebele once in a month. Moreover, they call and check what we did every Friday… When they call us for the weekly meeting, there is a supervisor, director, manager of the health centre, and an expert from the Woreda. They evaluate us every Friday based on the checklist they gave us. Moreover, the supervisor visits us once in a month… He brings a checklist. Then, he checks the number of pregnant women, who gave birth at home, if there is pregnant women’s death, how many children under the age of 5 are found, how many are measured, how many took vitamins, how many have pneumonia or diarrhoea, they will check list of their names who get treatment… Two times a month. Every 25th day of the month and on the 15th day of the month with the organization called Concern…” *HEW Tigray Region*

After six months of implementation, the HEWs are thereafter appraised based on their performance.

> “…at the end of six months of implementation, appraisal meeting was conducted with the HEW that all the report and list of service was improved and encouraging.” *ICCM AND SBNC Program Senior Specialist Save the Children*

> “We also conduct a review meeting every six months to assess the work of the HEWs. The HEWs are expected to bring the file that reports the patients they have treated so that they will be clinically reviewed. In this review meeting we will discuss the identified bottle necks; which could be on the supply of medicines or ability of children who not able to come to health posts for treatment together with Ministry of health, Woreda administrators and zone Health Bureau. We have two methods of follow up mechanism: start up and regular follow up methods. The former is an immediate post training method that checks whether the HEWs are practising the training they received properly or not. Then it is followed by the regular monthly type of follow up for their continuous performance.” *Project Coordinator for JSI L10K IMNCI Program*
The review meetings form a platform for the HEWs to air their grievances and request for additional products to support their work. Further, the review meetings form a platform where the HEWs can be appraised of changes in the treatment options.

“On the review meeting we oriented health extension workers, Woreda workers, and health centre workers that Cotrimoxazole is expired and it will be replaced by Amoxicillin DT. Health Extension Worker Tigray Region

**Effectiveness of the Improving Service Delivery Component in Ethiopia**

The activities towards improving service delivery in Ethiopia have had various results. First, 31% of the caregivers mentioned that a HEW has come to their household to inform them about pneumonia and diarrhoea. This could be attributed to the fact that the HEWs are assigned to specific health posts and do community meetings to create awareness. There is also the possibility that the message load they are required to cover is wide and thus are not able to focus on specific messages appropriately.

<table>
<thead>
<tr>
<th>Region</th>
<th>AMHARA (113)</th>
<th>OROMIA (95)</th>
<th>SNNP (117)</th>
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<td>46%</td>
<td>54%</td>
<td>47%</td>
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</table>

It was also observed that the HEWs were attributed to have created awareness concerning health issues and preventive measures in their communities (27% of caregivers mentioned), in offering good quality services in their communities (19% mentions by caregivers) as well as enabling easy access of health centres to the caregivers (mentioned by 6% of the caregivers).
It appears that this awareness creation resonated well with the caregivers because the program made it possible to avail information to the caregivers at community level and in a language that the caregivers could understand.

“The service comes closer to the community so that farmers never waste their time to get treatment. It is free service. Therefore, I can say the role of frontline health workers is vital.”

ICCM AND SBNC Program
Senior Specialist Save the Children

In terms of the nature of the relationship between the HEWs and the caregivers, it was observed that most people in the different communities (75%) mostly accept and relate well with the HEWS.

Further, 82% of the caregivers mentioned that HEWS have been able to alleviate or lessen challenged faced by women in their communities when seeking care for their sick children. The lowest score for this attribute was observed in Oromia and it is recommended that a review of the community’s interaction with the HEWs be reviewed to address issues that may be occurring.
The caregivers see opportunities in which the services provided by HEWs can be improved and recommendations ranged from them being able to create more awareness through trainings, to offering free and good quality services to being provided with enough drugs and working equipment.

Thus, from all these, we can say that the HEWs have been critical in meeting the demand for services created by the awareness creation exercises.

“Before the implementation of the Health extension program, caregivers used to go to local medicine man but after we become deployed; people don’t go to such places rather approach us.” Health Extension Workers Amhara Region
“So far, we have seen that if these frontline health workers are given proper and capacity building trainings, offered adequate materials and medicines, given regular monitoring and evaluation and supportive supervisions, they can achieve better and can be reliable in putting into action the strategy the government plans. So far we have learned that these frontline health workers have better achievement in this program in executing the regulation and follow the treatment guidelines.” Oromiya Region Integrated Community Case Management- Community Based New Born Care Regional Coordinator

However, some few considerations were made for future training programs. There were issues with the training structure and duration. In terms of the training duration, the HEWs felt that the amount of time allocated for that training program was shorter compared to the material that they were required to cover.

“We take ICCM (Integrated Community based Case Management) and CBNC (Community Based Newborn Care) training together with frontline workers. Hence, we will be well oriented in before supervising them…It was for two days. We also practiced by going to remote places…The training time was too short. We would have gained more knowledge if the training time was a bit longer; for example: IMNCI (Integrated Management of Neonatal and Childhood Illness) training is given at health centres for 15 days and they gain good amount of knowledge.” HEW Supervisor SNNP Region

Another issue with the training program is that it requires them to use a checklist of documents in their line of work and in front of their patients, which makes their patients lose confidence in their ability to treat their children.

“One thing that I did not like about the training is that we have to use the document to see the checklists in front of our patients. This could make our patients lose confidence on our ability to treat them. We are trained to open the document and look at the checklist to treat the patients according to the symptoms.” HEW Supervisor

Ensuring that the trained HEWs are provided with the correct products they need for their work to ensure compliance.

After zinc was incorporated in the algorithm and after, the frontline workers are trained about giving treatment-using Zinc; it was not made quickly available to them. ICCM_CBNC SNNPR Regional Coordinator PSI

**Efficiencies Realised During the Implementation of the Service Delivery Component**

It was noted that the improving of the service delivery component was implemented against the backdrop of iCCM that the government was supporting. By doing so, it was able to implement important activities efficiently. However, it appears that the private sector was left out in the improvement of the service delivery component, especially considering that a small proportion
of the caregivers make use of these private sector providers. Thus, it would be important to adopt an all-inclusive structure to ensure complete compliance and especially in the urban areas.

“…private sector providers don’t follow the guideline; they work randomly as per their own procedure. In cities, the number of children who go to private facilities is more than those who seek care from public facilities. One of the planned activities is to make these private health facilities follow this standard guideline when they give treatment to diarrhoea and pneumonia; supporting them so that they can use the ORS/Zinc Co-pack. In the area we are working, we gave orientation to private sectors on diarrhoea and pneumonia case management.”  

ICCM_CBNC SNNPR Regional Coordinator PSI

**Sustainability of the Service Delivery Component Established by the Program**

The program by riding on iCCM was able to improve service delivery. The iCCM is majorly driven by the government and the program was thus providing structures under which the iCCM approach can yield better results especially with regard to child health. Indeed, the HEWs and other health workers are paid by the government and are part of an elaborate community health provision strategy adopted by the government way before the program was implemented. Thus, the task for the program under this was to improve service delivery towards pneumonia and diarrhoea, within the existing structures. Consequently, once such structures are well documented, adopted and cascaded, and then this ensures the sustainability of the program. However, a few things were observed that could affect and derail the sustainability of this component.

**a. Fear that attention to certain messages or interventions are not given proper attention.**

It was observed that the HEWs go round the households that they are responsible for, conducting mapping for children under the age of 5 years, as well as identifying pregnant mothers that may require antenatal care. On the other hand, it was noted that 31% of the caregivers mentioned that a HEW has come to their household to inform them about pneumonia and diarrhoea. This clearly elaborates that certain messages or interventions are given more coverage than others. While sustainable to use the iCCM approach where multiple messages are addressed, there is, the fear that certain messages are not addressed adequately and may need multiple awareness creation channels.
b. **Focus on Women as HEWs**

The key recruitment criteria to become a HEW is a female, educated to grade 10, drawn from that community, speaks the local language and is selected by the health post. However, it was observed that this critical reliance on women as HEWs while helpful in delivering messages to the female population might not be that effective with the male population that tends to make central decisions in the household, especially on household finances. It was further observed that a reliance on females as HEWs was clouded with high attrition rate because they are not able to handle the terrain for which they are required to cover, and further, they are affected by social changes such as marriage – where they have to relocate to another area, or pregnancy – where they have to take time off work to take care of their babies. Thus, it might be important to push programs that recruit, train and use mixed gender HEWs or organise a clear structure for handling transfers and relocations.

In doing so, it would be important to take into consideration cultural, religious and social nuances about the subject that a male HEW can cover adequately.

> “… in a traditional society like ours, husbands do not feel good to see a male health worker talking and treating their wives at their house and attended…” *Oromiya Region Integrated Community Case Management- Community Based New Born Care Regional Coordinator*

c. **Need to Address Supplies Challenges**

It was noted that 13% of the caregivers mentioned that one of the challenges they face at the facilities was stock out of essential drugs. The same was reported by the HEWs where it was observed that initially, zinc was not provided after training and that later during the program implementation process that ORS expired in some areas.
There is need to sort out the supply chain issues to ensure that the right amount of product is procured and made available when it is required. Challenges with drugs not being readily available were prominently mentioned in SNNP region.

d. **Additional support to health posts from health centres**

There is further need to strengthen government health structures to establish a strong monitoring and evaluation process to ensure continued compliance.

“What I suggest is the government health structure should establish a strong monitoring and evaluation process since we have very limited period. But what we see practically is these health centres do not follow and support these health stations as they are expected to follow.” **Oromiya Region Integrated Community Case Management- Community Based New Born Care Regional Coordinator**

e. **Heavy workload for the HEWs**

The HEWS are burdened with workload and are sometimes forced to close the health post while round up houses or doing community visits.

*HEWs are burdened with workload; the caregivers may face difficulty in accessing the health posts at any time. The HEWs are sometimes forced to close the health post while rounding house-to-house visits with in the community. UNICEF Siaya County Project Coordinator, IDI*

This means that caregivers seeking their assistance in the heath posts may not find them, which may affect care-seeking behaviour.

f. **Challenge with frequent training in light of assigned workload**

It appears that the HEWs are required to attend training programs as and when required. This was said to overwhelm them in light of their other responsibilities in the communities.
Major challenge is the unavailability of participants and HEWs due to workload and fed-up with the frequent trainings, which we resolved it by conducting the review meeting over the weekends so that they can go to their regular job on Monday. *ICCM Advisor JSI*

Thus, there is need to structure these training programs in a balanced approach and in a manner that will still allow them to continue with their other responsibilities.

### 6.3.4 The Supplies Management Component

The supplies management component under this program needed to procure and make available essential medicines used for the treatment of pneumonia and diarrhoea. It needed to increase availability of essential medicines used in management of diarrhoea and pneumonia through strengthening procurement and supply chain management.

**The Need for the Implementation of the Supplies Management Component**

As noted earlier, 13% of the caregivers mentioned that one of the challenges they face at the facilities was stock out of essential drugs.

Stock outs of drugs indicate challenges in the process of quantifying supplies and making forecasts of what might be required across the value chain. Further, it might indicate challenges in procuring and distributing essential products and medicines. Thus, there was need to sort out the supply chain issues to ensure that the right amount of product is procured and made available when it is required.

Further, under this program, a co-packed ORS/Zinc needed to be provided and thus there needed to be concerted effort to enable bundling. In Ethiopia, there were discourses made for and against central bundling as well as health centre bundling of ORS and Zinc. Thus, the
program needed to strengthen the capacity of PFSA for ORS/Zinc co-packaging. Finally, the program also needed to support the procurement of Amoxil DT, ORS and Zinc to be used in the implementation. Thus, the supplies management component was critical to the success of the project.

**Supplies Management Activities Implemented Under the Program**

A variety of supplies management targeted activities were implemented under the program. As mentioned earlier, it needed to provide technical assistance to improve the quantification and forecasting for the national procurement of essential medicines. In this regard, technical and financial assistance was given to FMOH/PFSA for two rounds (one in 2013 to 2015, and another in 2016 to 2018) to support the quantification and forecasting for iCCM commodities.

Further, there was need to provide technical and financial support the packaging and distribution of essential medicines and towards this end, FMOH/PFSA was supported towards this end. PFSA was strengthened to support the national co-packaging of ORS/Zinc and towards this end; 1.8 million ORS/Zinc co-packs were distributed by PFSA.

“In the beginning ORS and Zinc were given separately. Sometimes Zinc and other times ORS was prescribed. It depended on the health professional. Now they are coupled and given together. The paring helps avoid mismatches.” *Technical Advisor for Child Health at the Federal Minister of Health, Maternal and Child Health Directorate Transcript*

There were activities that sought to check the acceptability and options for packaging.

Additionally, there was need to strengthen the procurement and distribution mechanisms for essential medicines at all levels of the system through focused technical assistance. First, PFSA was provided with technical and financial support through training and supervision. Further, the program enabled the printing of the PFSA’s Standard Operating Procedure (SOP) document. Subsequently, the program facilitated efforts to strengthen the national supply chain and facilitate an experience sharing and training visits to its branches.

“Under iCCM program we supply essential medicines to health facilities once every six months. In the CBNS program, we are supplying essential medicines according to the demand. When there is demand from health facilities the CBNS program provides the demanded essential medicines. Therefore, when shortage of essential medicines occur the CBNS program has been trying to fill the gap. We follow up distribution of essential medicines through our child health focal persons in all regions. We have partner organizations in all localities so that when problems occur partners immediately respond to address the problems.” *Pharmaceutical Logistic Management MOH*
There was also need as well to provide refresher training on inventory management to frontline health workers involved in iCCM/IMNCI and as a result, over 10,000 HEWs and their supervisors were trained on inventory management.

“We need to ensure that they purchase main medicines they need. Health centres manage their income on their own. Hence, they will allocate budget from their income in advance. They will do a breakdown of their income, plan what portion of their income should be allocated for their budget, and get it approved by the board. Then they will send the list of medicines they need to PFSA and the purchase will be done through PFSA. Hence, PFSA will buy and send it to them.”

ICCM_CBNC SNNPR Regional Coordinator PSI

It was also necessary to strengthen the regulatory capacity of FMHACA and towards this end; UNICEF placed technical assistants in this organisation. Under this, UNICEF supported FMHACA in the development of a regulatory Msc curriculum and was able to prioritize newly imported MNCH drugs on the fast track list. Further, it was required to support the procurement of Amoxil DT, ORS and Zinc.

“On the supply side we are doing some work to increase Amoxicillin DT availability. There is a workshop, and we are doing promotion work to encourage private sectors to import Amoxicillin DT like how they import Amoxicillin capsules and tablets so that people can get it on the market. First, we made Amoxicillin DT to be included in the national essential drug list. Therefore, we are doing awareness creation work so that the private sector can register, import and distribute it.”

Supply and Logistic Officer in the Health Program of UNICEF Ethiopia

“The government chose dispersible tablet because of different reason such as logistics and price. It is a tablet so you can easily transport it and it is easy to store. Its shelf life is longer, it is easy to demonstrate and it is not that difficult to import. So easier logistics and better price. As a treatment for a child Amoxicillin is necessary so that is why Amoxicillin DT was chosen over Cotrimoxazole.”

Technical Advisor for Child Health at the Federal Minister of Health, Maternal and Child Health Directorate

“I think the shift from the amoxicillin capsule to DT is the result of different research programs and recommendations of mainly WHO and UNICEF. It is from UNICEF that we got this new dispersible table and I had never heard of it before UNICEF. We also have part to play in advocating this tablet, but our advocacy depends on the supply of the medicine.”

Region Integrated Community Case Management-Community Based New Born Care Regional Coordinator

Towards which it was reported to have procured 15.3 million tablets of Amoxil DT (250mg), 4.6 million tablets of Zinc DT and 16 million sachets of ORS, which were distributed by UNICEF and PFSA.

Effectiveness of the Supplies Management Activities

As observed above, the program was able to make available ORS, Zinc and Amoxil DT. First, the program was able to make sure that zinc was incorporated in the list of essential medicines.
“After zinc was incorporated in the algorithm and after the frontline workers get trained about giving treatment using Zinc; it was not made quickly available to them.”

ICCM_CBNC SNNPR Regional Coordinator PSI

All the same, in terms of whether this initiative was able to make these essential medicines available at the local level can be seen from the information provided by the caregivers of children under the age of 5 years, only 5% of the caregivers mentioned that they had challenges acquiring ORS because it was not available.

The caregivers that mentioned that they attempted to purchase or acquire ORS and it was not available tried doing so in a public health facility. It was also apparent that six of these caregivers mentioned that this happened only once in the last one year.

It was noted that the situation and the experience of acquiring ORS was way better than it was in the previous year.
However, there was an interesting twist where some program implementers mentioned that they faced shortages for ORS while others mentioned that there was excess supply for the same product. These shortages for ORS were mentioned in the SNNP and Oromiya regions as shown by the excerpts below.

“…Last time there was some interruption in the supply of ORS and we reported it to health centres. Then, they immediately bought it from their budget and distributed it to health posts…Emergency purchase is done for ORS when the amount we have is about to be depleted. Purchase is done every three months. ORS is the one that gets quickly stocked out …When we experienced stock out, health posts reported to us and health centres reported to the Woreda.” **HEW Supervisor SNNP Region**

“We mainly give them ORS. To start with, we distribute from 30-50 sachet to every health station. Since our officers visit these health stations every time, we do the transportation of ORS obtained from different sources. But recently there was a shortage of ORS, for the ORS at stock were expired in July or August 2015.” **Oromiya Region Integrated Community Case Management- Community Based New Born Care Regional Coordinator**

“There was shortage of supplies for diarrhoea treatment, especially ORS.” **CBNC SNNPR Regional Coordinator PSI**

However, on the other hand, it appears that UNICEF had an excess of the ORS that they were unable to find people to be supplied to.

“In the past three or four years, ORS was excess to the extent we can’t find people to get supplied.” **Supply and Logistic Officer in the Health Program of UNICEF Ethiopia**

This goes to show that issues with procurement and distribution are yet to be completely sorted out because stock outs were reported and took longer to resolve for ORS. With regards to Zinc on the other hand, only a negligible proportion of the caregivers indicated that they tried purchasing or acquiring zinc and it was not available.
This zinc was missing in a public health facility and this happened within the last year of the program. First, it is worth noting that this low proportion of caregivers that have ever tried purchasing or acquiring zinc to treat diarrhoea could be attributed to the low levels of awareness about the product due to the previous preferred and provided essential medicines for diarrhoea.

“The best drug that the project used to treat diarrhoea is ORS. The other medicine is Zinc. As we know, Zinc wasn’t given as drug in previous time whereas now, government and partners decide to provide Zinc with ORS.” ICCM AND SBNC Program Senior Specialist Save the Children

“People were not using Zinc in the past because there was no awareness besides its being new to our country. In the past, Zinc was thought to have toxicity and there was a problem of using it together with other medicines. Nevertheless, recent developments have shown that Zinc is found to be important for diarrhoea treatment after it was studied… The awareness definitely has limitations because it is a new product. People may not be aware that it can be used for diarrhoea and in some stores it may be simply kept on shelf for long.” Project Coordinator for JSI L10K IMNCI Program

It was observed from the key informants that this product was not available to be distributed to the HEWs immediately after their training. Further, it was observed that subsequent shortages of zinc were due to interruption in supplies and its short life span.

“Shortage of medicine is experienced for Zinc due to the interruption of supplies and its short life span.” CBNC Coordinator JSI L10K

“The delay in the supply of Zinc was one problem…further, there were interruptions in supply…At health posts level, Zinc may not be available and in such cases they prescribe only ORS.” CBNC SNNPR Regional Coordinator PSI

Prescribing ORS alone without zinc was not the only challenge as it appeared that even in some other public health outlets, caregivers were advised to purchase from private pharmacies as the available product in SNNP region was about to expire.
"Zinc was stock out for some time and we were advising them to buy it from private pharmacies… there was no Zinc because what was imported by PFSA has left only 7 days to expire… Zinc does not get stock out quickly but if it is stock out there is no way of getting it quickly. We have faced stock out of Zinc once in the year 2015… In 2016, it has been three or four months since Zinc is supplied to health posts; however, it was not available before that… When we experienced stock out, health posts reported to us and health centres reported to the Woreda.” HEW Supervisor SNNP Region

As noted earlier, the program was responsible for facilitating the bundling of ORS and Zinc together to enhance the availability of both products. It was noted that a significant number of caregivers had never tried to purchase the product (86%). Only a negligible proportion of the caregivers mentioned that they tried purchasing the product and it was available (12%). About 2% on the other hand mentioned that they attempted to acquire it and it was not available.

Have you ever tried purchasing or acquiring ORS/Zinc Co-Pack and it was not available?

<table>
<thead>
<tr>
<th>Region</th>
<th>Total(266)</th>
<th>AMHARA(68)</th>
<th>OROMIA(57)</th>
<th>SNNP(86)</th>
<th>TIGRAY(55)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No, never tried purchasing product</td>
<td>86%</td>
<td>96%</td>
<td>72%</td>
<td>83%</td>
<td>96%</td>
</tr>
<tr>
<td>Yes, tried purchasing but product was not available</td>
<td>12%</td>
<td>3%</td>
<td>26%</td>
<td>15%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Those that could not find it tried to obtain it largely from a public health facility and this was majorly within the last one year, though there was consensus that its availability had improved as compared to the previous years. What was however interesting to note is that there was a feeling that the ORS/Zinc co-pack was not available at the public health facilities but rather, was mainly made available in private health facilities and pharmacies.

"[the ORS/Zinc co-pack] it is not available at the public health facilities. It may be available in private health facilities and pharmacies." ICCM_CBNC SNNPR Regional Coordinator

It is worth noting though, that private social marketing firms were actively involved in driving the availability and use of the co-pack and this could have contributed to the co-pack’s availability in private health facilities and outlets.

With Amoxil on the other hand, we observed that not many caregivers were aware of the availability of the Amoxil DT that was being introduced under this program. Thus, most caregivers could only relate to Amoxil in its other forms (syrups, suspensions etc.) and even
then, only 7% mentioned that they had tried purchasing or acquiring Amoxil and it was not available.

Thus, insights on the availability of this product were thus gleaned from the key informant interviews and it is evident that supply and the management of the distribution for Amoxil DT was better than that of ORS and Zinc.

“...Amoxicillin is bought before what we have is completely depleted...Amoxicillin usually don’t get stock out...HEW Supervisor SNNP Region” HEW Supervisor SNNP Region

“We didn’t face acute shortage of Amoxicillin after we replaced it with Cotrimoxazole. We are supplying an amount which would be enough for six months to 1 year...we didn’t receive any report about its being stock out or shortage in the past two or three years.” Supply and Logistic Officer in the Health Program of UNICEF Ethiopia

Though it was noted that there was some bit of delay in acquiring the product at the beginning and so as a result, the providers continued using Cotrimoxazole.

“The first medicine that was used during the beginning of the program was Cotrimoxazole/ Bactrim/. But, at this time the new guideline ordering the use of Amoxicillin was out.” ICCM AND SBNC Program Senior Specialist Save the Children

There were also issues of non-compliance to the new guidelines when Amoxil DT was introduced that mired the impact that could have been expected with the introduction of this product.

“The treatment given at the health centres does not go in line with the treatment on the national guideline for pneumonia treatment. One reason for this is since the health workers at the health centres are above middle level health professionals, there is a tendency undermining the guideline.” Oromiya Region Integrated Community Case Management- Community Based New Born Care Regional Coordinator

Further, there were concerns about the packaging and presentation of Amoxil DT, as it was feared that by parents dissecting the tablet – based on the recommendation of the health...
providers, they were essentially running at risk of introducing other infections and diseases such as diarrhoea.

“Earlier most of the tablets used to come in a container...and the dispensers would use a spoon to pick a tablet from a jar like container and then put it on a locally made paper pocket...Such table packaging are subjects for contamination. Sometimes some tablets have a line that dissects it and parents may be asked to divide it and give it to their children. Such use of medicine could cause another problem and may cause things to move from bad to worst. In such times we may give a child diarrhoea in an effort to cure pneumonia.”

Oromiya Region Integrated Community Case Management- Community Based New Born Care Regional Coordinator

**Efficiencies Observed with the Supplies Management Activities**

It was observed that the supplies management activities were using an approach that sought to strengthen existing structures rather than recreate new ones. This was so for most components with the exception of the procurement of Amoxil DT.

For instance, technical assistance was provided to improve the quantification and forecasting for the national procurement of essential medicines. Thus, FMOH/PFSA was provided with both technical and financial assistance for two rounds (one in 2013 to 2015, and another in 2016 to 2018) to support the quantification and forecasting for iCCM commodities. Further, the project sought to strengthen FMOH/PFSA in the packaging and distribution of essential medicines. Additionally, there was need to strengthen the procurement and distribution mechanisms for essential medicines at all levels of the system through focused technical assistance. First, PFSA was provided with technical and financial support through training and supervision. Further, the program enabled the printing of the PFSA’s Standard Operating Procedure (SOP) document. Subsequently, the program facilitated efforts to strengthen the national supply chain and facilitate an experience sharing and training visits to its branches. There was also need as well to provide refresher training on inventory management to frontline health workers involved in iCCM/IMNCI and as a result, over 10,000 HEWs and their supervisors were trained on inventory management. Though there were gaps in distribution, these are issues that UNICEF would be able to continue providing support for until 2018, especially because there needs to be a critical review of the supply and distribution chain from the national level to the local areas.

PFSA was further strengthened to support the national co-packaging of ORS/Zinc and towards this end; 1.8 million ORS/Zinc co-packs were distributed by PFSA. It was also necessary to
strengthen the regulatory capacity of FMHACA and towards this end; UNICEF placed technical assistants in this organisation. Under this, UNICEF supported FMHACA in the development of a regulatory Msc curriculum and was able to prioritize newly imported MNCH drugs on the fast track list.

Further, it was required to support the procurement of Amoxil DT, ORS and Zinc. Towards which it was reported to have procured 15.3 million tablets of Amoxil DT (250mg), 4.6 million tablets of Zinc DT and 16 million sachets of ORS, which were distributed by UNICEF and PFSA. All these go to prove that the program was implemented with a view of strengthening existing systems and structures to produce sustainable results.

**Sustainability of the Supplies Management Activities**

As noted in the previous subsection, the supplies management activities for the essential medicines used to treat pneumonia and diarrhoea were implemented with a view of strengthening existing systems and structures to produce sustainable results.

“I have participated in the supply of almost all the mentioned medicines including ORS, Zinc, ORS/Zinc and amoxicillin DT. The distribution of these facilities is used to be done with the existing administrative structure. Medical supplies are distributed from federal to regions. Regions in turn distribute to woredas, then woredas to localities or health posts so extension workers can access.” *Pharmaceutical Logistic Management MOH*

That notwithstanding, there are a few issues that would need to be addressed for sustainability.

**a. Relooking at the Transportation Options for the Different Woredas**

It was observed that some Woredas did not have adequate transportation facility to collect medicines by themselves and this might have affected distribution.

“One of the barriers caregivers face is lack of transportation and road facility. Sometimes the HP is closed when they reach to get the service. This happens because; in most HPs, only two HEWs were assigned to do their work. In reality, those HEWs have heavily loaded tasks and have burden of work. This condition should be improved.” *ICCM AND SBNC Program Senior Specialist Save the Children*

“Woredas don’t have adequate transportation facility to collect medicines by themselves. Therefore, as I have mentioned earlier transporting medicines to their centre by PFSA solves the problem. The logistic problem will be solved when a dedicated unit transports the medicine to them instead of them collecting it by themselves. Regarding man power, you can’t find supply chain oriented people in every place and in good number.” *Supply and Logistic Officer in the Health Program of UNICEF Ethiopia*
It was recommended that this could be solved by having PFSA provide dedicated transport arrangements so that medicines are supplied directly to the Woredas rather than have the Woredas collect their medicines.

b. **Need to Review the Distribution System for Amoxil DT and Adopt it if Feasible for Other Essential Products**

It was noted that Amoxil DT while delayed, did not have issues with stock outs during the project implementation. It was also observed that the distribution of Amoxil DT was undertaken by UNICEF under its CBNS program.

“Amoxicillin is supplied in two channels as well. Of course, it is not supplied up to the level of health posts by PFSA. PFSA supplies up to the level of health centres only. However, the health centres have the mandate of supporting health posts with the supply of medicines too; due to this, they distribute supplies to health posts. But mainly it is supplied by UNICEF. When Amoxicillin was made the first drug of choice for pneumonia, it was distributed in all zones.” **ICCM_CBNC SNNPR Regional Coordinator**

“Distribution of Amoxicillin DT was being undertaken by UNICEF under its CBNS program so that you can find the data from CBNS program.” **Pharmaceutical Logistic Management MOH**

Thus, it would be important to review the things that worked under this arrangement and possibly replicate them to avail essential medicines in Ethiopia for children under the age of 5 years.

c. **The need to address the Issue of Stock-Outs**

It appears that the issue of supplies management and distribution kept on recurring for ORS and Zinc. Products expired while in the facilities and there was not a proper system to anticipate this. This shows that there is still a big issue with stock outs, and especially with inventory management with the HEWs and with the health facilities in the different regions. It is necessary to review the inventory systems and bin cards to observe gaps and make suggestions for improvements.

“There is a bin card which we use for monitoring purpose. There is a bin card for every medicine type and based on the information we get from there; we inform responsible bodies to immediately supply medicines so that there will not be a shortage... The medicines are taken from stock based on models and at that time, we will monitor it using a bin card. When health extensions request medicines that they run out of, we will immediately transport to them from the Woreda. Therefore, you distribute medicines to health extensions.” **HEWs Supervisor**

The supply system is weak and it appears that linkages between the teams serving the communities and those at the national level are delinked.
d. **Sustainability Issues with Respect to Amoxil DT**

UNICEF handled procurement for Amoxil DT and thus, there were adequate supplies for the program. However, the other products that the government was procuring for the management of pneumonia were reported to have experienced stock outs and thus, it is not quite clear whether efforts to make available Amoxil DT would continue without the future support of UNICEF.

“Yes there are enough but there are instances that we experience stock outs specially Cotrimoxazole. However, we suffer from stock out only if we wait for donation so we make free supply for health posts after the health centres make purchase. Before we proceed with this approach, the health posts used to wait until the assistance arrive. Currently we never experienced a serious stock out problem that hinders the treatment process.”*Nutrition and Children Health Affairs Health Centre and Health Post Supervisor Transcript*

“The medical supply is being provided by the ministry and partners. However, there are times that these supplies may be delayed or interrupted. In this regard every possible effort is being made by the Ministry and its partners to ensure consistency of medical supplies.”*Pharmaceutical Logistic Management MOH*

Though its sustainability is somewhat ensured by having introduced it in the essential medicines list, there is need to strengthen the government’s effort toward the procurement of this product and scale up its use in the private sector.

“According to the assessment data I am aware of amoxicillin DT is neither a medicine that is manufactured locally nor imported by PFSA. So I am certain the private sector doesn’t treat using the dispersible tablet.”*UNICEF Siaya County Project Coordinator, IDI*

### 6.3.5 Public-Private Partnership Activities

There was need under this program to strengthen public-private partnerships and make better use of private sector channels for appropriate diarrhoea and pneumonia treatment. Thus, this component focussed on these partnerships and these are elaborated in detail in the subsections below.

**The Need for Public-Private Partnership Activities in Ethiopia**

Under this program, there was need to create and facilitate public-private partnership forums to advocate for the effective production, distribution and use of locally produced and co-packed ORS and zinc products to be made available at public, private and faith based health facilities and pharmacies.
Most importantly, there was need to support the co-packaging ORS and Zinc in a diarrhoea treatment kit and co-market it through appropriate private sector channels. In addition to that, there was need to do an operational study on co-packaged ORS and Zinc.

Further, there was need to conduct an orientation on the standard guidelines on diarrhoea and pneumonia management to private clinics and dispensaries.

**Public-Private Partnership Initiatives Implemented in Ethiopia**

As noted earlier, there was need to create and facilitate public private partnership forums to advocate for the effective production, distribution and use of a locally produced and co-packed ORS and Zinc product available at public, private and faith based health facilities and pharmacies.

> “Those who work on pneumonia and diarrhoea have advocated for the dispersible tablet. They are also pushing for it to be produced in Ethiopia.” *Technical Advisor for Child Health at the Federal Minister of Health, Maternal and Child Health Directorate*

> “The advocate for the change to Amoxicillin DT…was mainly done the Federal Ministry of Health. Other partners like Save the Children, JSI, Path also participated.” *ICCM_CBNC SNNPR Regional Coordinator*

Towards this end, UNICEF embarked on developing a national strategy and implementation plan for PPP that was developed jointly by various partners and with the endorsement of the FMOH. In doing so, public and private sector representatives were involved in the process while UNICEF supported the process. It also provided support to FMHACA to convene pharmaceutical companies.

> “We inform importers and manufacturers about the importance of these medicines and their being included in the essential medicines list of the country; so that the importers can participate on the supply of these medicines.” *Health Regulatory Advisor FMHACA*

Additionally, there was need to support the co-packaging and co-marketing of ORS and Zinc into a Diarrhoea Treatment kit through appropriate private sector channels. Towards this end, DKT, a social marketing NGO that has coverage in 95% of the urban private pharmacies and drug shops was engaged. It was observed that a different strategy was needed for the rural areas as DKT did not have adequate coverage in these areas and thus it was agreed that the public health system would be used to reach these.

> “Yes we have been focusing on advocacy the past two/three years. First, together with support from PFSA, government logistics system, we distributed Zinc + ORS to the regions. Second in collaboration with UNICEF, HEWs and health centre staffs received training that focused on service provision and...”
Thirdly, we conducted advocacy and communication to the public through DKT in the SBCC activities through print, TV and radio. We also gave some other tasks to DKT...through DKT, we conducted SBCC activities & mass media campaign usually through TV...we participated during the promotion of Lemlem +. DKT is experienced with advocacy and communication and they are now promoting Zinc + ORS treatment too. Secondly, while health centres are being trained we make sure to train them on the essence of Zinc too.” Senior Program Officer MicroNutrient Initiative

“There are partnerships...for example DKT does the social marketing...it avails some products at a lower price for private use.... There are many partners who advocated for it and one of those is UNICEF and others like Research for Development (R4D) and CHAI. Those who work on pneumonia and diarrhoea have advocated for the dispersible tablet. They are also pushing for it to be produced in Ethiopia. Technical Advisor for Child Health at the Federal Minister of Health, Maternal and Child Health Directorate

Thirdly, there was need to collaborate with Micronutrient Initiative (MI) to do an operational study on co-packaged Zinc and ORS. This report was disseminated in March 2016 and can be found online.

Finally, there was need to conduct an orientation and provide standard guidelines on diarrhoea and pneumonia management to private clinics and dispensaries. In total, approximately 500 private clinic providers were given a day’s training on diarrhoea and pneumonia standard case management that comprised of a presentation and videos, as well as exercises and discussions. Laminated job aids and protocols were provided and the regulatory heads from the regional health bureaus and zonal health departments participated in the training. Private practitioners committed to follow and use the protocol in diarrhoea and pneumonia management in the private clinics and dispensaries.

**Effectiveness of the Public-Private Partnerships Implemented**

The effectiveness of the public private partnerships can only be assessed in terms of what they achieved. It was observed that there was progress towards supporting policy formulation and in providing standards and guidelines for the treatment of pneumonia and diarrhoea in children under the age of 5 years. For instance, 500 private practitioners were orientated on the standard guidelines on diarrhoea and pneumonia management to private clinics and dispensaries. There is need to monitor and follow up to see whether they are following these standards and guidelines. The project was also able to work with the government to include Zinc and Amoxil DT in the essential medicines list and this goes forward to lay a good foundation for the project. Indeed, it was noted that the private sector had played a great role in promoting ORS and Zinc
and in creating awareness for these products, as well as in producing and distributing these products in private sector channels.

“The private sector has played a great role with promoting Zinc + ORS medicine. When looking to the private pharmacies, for those caregivers who have the accessibility and awareness, Lemlem+ was being promoted and was available in the private sector market… I know the private sector is involved in manufacturing, promoting and supplying medicines with minimum cost.” 

Child Health Project Coordinator, JSI

The process of laying the guidelines for the acquisition and procurement of essential medicines was beginning to bear fruit as it was also observed that the process of acquisition of essential medicines was planned and done in an organised manner; and with the involvement of all partners.

“The process of acquisition of essential medicines is being done in a planned and an organized manner. Partners are involved in the process. These are what I like about the process.” 

Pharmaceutical Logistic Management MOH

What however remains is to sort out the challenges with the supply chain and distribution of these products to ensure that these products are first, possible to forecast and anticipate demand, and that second, these products are able to get to the intended users as and when they are required.

Efficiency of the Public Private Partnership Initiatives

The process of creating public private partnerships was well implemented. It began with the identification of potential partners. Thereafter, policy formulation and the setting up guidelines for the implementation of program activities were done to form the foundation for the implementation. The assignment of roles also appeared clear with regard to this component and UNICEF played a supportive role and got the endorsement of the government.

The program was able to engage private sector players in the procurement process, in co-packaging, in the awareness creation activities for these products and in their distribution in the urban areas.

As Ethiopia is largely rural, there is need to strengthen the public sector distribution process to ensure that the same benefits that the private sector was able to achieve, are also realised in the public sector.
Further, a few challenges were observed with regard to progress reporting by the various partners and it was felt that there was no formal reporting structure and it meant that critical information might not have been available to the government and other partners in good time.

“…when this program started there was no formal reporting structure… the implementation status of the trainees and the report of the training were made to UNICEF notwithstanding the fact that the Ministry office was entitled to see the report… sometimes the Ministry was delegated to look into the report during the review meetings… that was before the government took full responsibility” iCCM Advisor JSI

**Sustainability of the Public Private Partnership Initiatives Implemented**

The public private partnerships can be said to be sustainable as they brought into action both public and private sector players. It created opportunities for private sector players and that is enough to drive sustainability through the private sector. There were efforts to support government and critical components of this were the structures and guidelines that were created as a result. A few things however need to be addressed that would threaten sustainability.

### a. Need to Mop Out Loose Products for Diarrhoea Management.

It was observed that a number of loose products existed for the management of diarrhoea in the private sector and these were affecting the use of Zinc. There is need to think of a strategy to mop out the existing loose products that are not co-packed.

### b. Supervision of Private Sector to Ensure Compliance to the Guidelines

Linked to the issue listed above, there is need for supervision of the private sector to ensure compliance to the treatment guidelines that were provided. The private sector is guided by paying ability of the caregivers and thus tended to give one of the co-packed products. Bundling of these diarrhoea mismanagement products would be one of the ways to address this, as would be enabling supervision of such private sector players for compliance.

### c. Need to Address and Come Up with a Public Sector Strategy to Support Product Distribution in the Rural Areas

It was observed that while DKT was able to have good coverage in the urban areas, the public sector players were not able to achieve good coverage in the rural areas and there is need to relook at ways of addressing these challenges. One of the ways this could be done would be
possibly engaging the private sector to cover the rural areas, and another could be through strengthening the supply chain to ensure better forecasting and product distribution.

d. **Relooking at the Procurement Process for ORS and Zinc for the Public Sector**

UNICEF handled procurement for Amoxil DT and thus, there were adequate supplies for the program. However, the other products that the government was procuring for the management of pneumonia were reported to have experienced stock outs and thus, it is not quite clear whether efforts to make available Amoxil DT would continue without the future support of UNICEF.

“Yes there are enough but there are instances that we experience stock outs specially Cotrimoxazole. But we suffer from stock out only if we wait for donation so we make free supply for health posts after the health centres make purchase. Before we proceed with this approach, the health posts used to wait until the assistance arrive. Currently we never experienced a serious stock out problem that hinders the treatment process.” *Nutrition and Children Health Affairs Health Centre and Health Post Supervisor Transcript*
6.4 Focus on Niger

Niger is considered one of the poorest countries in the world with two thirds of the population reported to be living on less than a dollar a day. The country is ranked 188th out of 188 countries in human development capacity\(^{11}\). This low level of human development capacity is combined with a rapid population growth of 3.9% per year (currently estimated to be at 19.8 million people), one of the fastest population growth rates in the world\(^{12}\). In 2013, the under-five years’ mortality rate was estimated to be at 125 deaths per 1,000 live births.\(^{13}\) This context is also characterized by the persistence of social norms that contribute to delayed and limited use of health services for childcare. This notwithstanding, recent reports indicate that Niger has made considerable strides in the reduction of child mortality rates in the country. The country is one of the eight ‘high mortality countries’ (that had at least 40 under five deaths for every 1,000 live births) that have been reported to have already reached or surpassed the MDG target of a 67% reduction in under five mortality rates\(^{14}\). The under-five child morbidity and mortality however continue to be key areas of concern with diarrhea and pneumonia ranking among the three leading causes of under-five child mortality in the country as shown below.

![Post neonatal deaths (aged 1-59 months)- WHO, 2013](image)

Against this background, UNICEF implemented a Diarrhoea and Pneumonia Treatment Initiative in the country whose overall objective was to contribute towards the reduction of child morbidity

\(^{11}\)http://hdr.undp.org/en/indicators/57506


\(^{13}\)http://www.who.int/gho/publications/world_health_statistics/EN_WHS2013_Full.pdf

and mortality through increased demand for and reliable supply of effective treatment for diarrhoea and pneumonia in the country. The program was implemented in two regions; Maradi (in the districts of Madarounfa and Mayahi) and Zinder (in the districts of Matameye and Mirriah). These regions were considered due their high burden in under-five child mortality rates. As shown below however, two other regions (Tillaberi and Dooso) had a higher burden than the selected regions.

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diffa</td>
<td>41</td>
</tr>
<tr>
<td>Agadez</td>
<td>51</td>
</tr>
<tr>
<td>Niamey</td>
<td>80</td>
</tr>
<tr>
<td>Tahoua</td>
<td>140</td>
</tr>
<tr>
<td>Zinder</td>
<td>160</td>
</tr>
<tr>
<td>Maradi</td>
<td>166</td>
</tr>
<tr>
<td>Tillaberi</td>
<td>168</td>
</tr>
<tr>
<td>Dosso</td>
<td>190</td>
</tr>
</tbody>
</table>

It was however noted that a number of other factors informed the selection of the project regions. A joint UN action plan for resilience building in 35 vulnerable municipalities of Niger had been developed by UNDAF. These municipalities were selected based on the following criteria: the vulnerability to food insecurity, child malnutrition, access to basic social services, and ongoing projects and programs in the municipalities that could contribute to resilience building and typology of the municipalities (nomadic, sedentary, agricultural and pastoral). Seven of these municipalities were in the targeted health districts for the Diarrhoea and Pneumonia Initiative. In addition to that, UNICEF Niger was also involved in the implementation of a nutrition project implemented in six communes of Madarounfa, Mayahi and Matameye with the support of the European Union (EU) for acceleration towards the MDGs in Niger. These initiatives constituted an opportunity to strengthen synergies among different sections of UNICEF country program and synergies with other agencies and development partners in order to improve performance of the Diarrhea and Pneumonia Initiative interventions and rationalize the use of resources for shared goal achievements.
6.4.1 Current Programming in Niger

As indicated, the under-five child mortality rate in Niger is one of the worst in the world, with diarrhea and pneumonia being among the leading contributors of the post-neonatal deaths. Studies have continued to show that this is because of a number of factors among them including limited access to healthcare services. Medical facilities in Niger are limited, even in the capital. State-run hospitals and clinics often lack equipment and essential drugs. There is also a severe shortage of trained medical professionals.\textsuperscript{15} In addition to that, ignorance of key family practices, such as hygiene, and persistence of social norms further aggravates the situation. Many people turn to local [traditional] healers when they fall ill.\textsuperscript{16} Innovative steps were therefore required to enhance demand generation and service provision of both preventive and curative services in the country through essential behavior change. The Diarrhea and Pneumonia Initiative in the country was implemented alongside other interventions to in response to this situation. In particular, this Initiative sought to contribute towards the reduction of child morbidity and mortality through increased demand for and reliable supply of effective treatment for diarrhea and pneumonia in Niger. The program focus areas included the following:

a) Demand generation  
b) Service Delivery  
c) Supply Management  
d) Public-Private Partnerships

Each of these items was evaluated and is presented in this report based on OECD guidelines of relevance, effectiveness, efficiency and sustainability.

6.4.2 Demand Generation – Communication for Development

Demand generation was targeted at key stakeholders in the health sector as well as primarily at the caregivers of children under 5 years and their families.

\textsuperscript{15}http://www.our-africa.org/niger/poverty-healthcare  
\textsuperscript{16}http://www.our-africa.org/niger/poverty-healthcare
The Need for the Demand Generation Activities

It is notable that in a bid to increase demand for care in the country, the government of Niger introduced a free healthcare policy that was meant to alleviate the financial burden of accessing healthcare for women and children. Women and children are therefore entitled to access healthcare services free of charge. However, the context of these free services is in reality a system of third-party payment where the government is supposed to reimburse health facilities of costs of care provided to children and women. This system is faced with challenges due to the refusal by the State Government to provide reimbursements to health facilities. This situation has affected the financial autonomy of these structures and has affected the quality of care, and consequently, the demand for healthcare, with the population opting to turn to local traditional healers. The implemented Diarrhoea and Pneumonia Initiative was therefore necessary as it addressed underlying issues that affected care-seeking behaviors. Targeting local authorities and traditional chiefs during demand generation was found to be effective as it created an enabling environment for encouraging dialogue. Dialogue and social learning has been proven the preferred method to get people to better understand issues related to child health and increasingly encourage them to analyze their problems, find solutions to prevent disease and contribute to a better management of child health.

In order to enhance demand generation in the targeted regions, a number of communications for development activities were developed and implemented. These were aimed at achieving the following results:

a) Having the professional associations and community leaders advocate for pneumonia and diarrhoea
b) Having caregivers exposed to national awareness campaigns on pneumonia and diarrhoea
c) Having caregivers exposed to behaviour change communication by frontline providers and local partners about the dangers and signs of and appropriate treatment for diarrhoea and pneumonia
d) Having strategies prioritized to reduce non-financial and financial barriers to treatment identified by caregivers
Demand Generation Activities Implemented Under the Program

Designed and implemented activities included social mobilization and interpersonal communication activities that were supported to generate demand for appropriate diarrhea and pneumonia care seeking. Training of trainers’ sessions were organized at the onset for supervisors and facilitators (recruited for communication development) where topics such as interpersonal communication, social mobilization and implementation of community self-diagnosis related to Essential Family Practices- EFPs- were covered. Activities carried out comprised of environmental days, social dialogue sessions (informed by “FADA videos”- educative health films which involved villagers acting in the films produced, as well as interactive radio programs with educative content broadcast in local languages, as well as visual images of KFPs- Key Family Practices- on clothes worn by community workers as they carried out awareness campaigns), door to door counseling and public debates that aimed at generating awareness and encouraging care seeking behaviors. In addition to that, regular meetings with municipalities were also held to engage them in the promotion of KFPs for prevention and care of diarrhea and pneumonia. Regional and local forums were also organized in collaboration with PSI to advocate for the raising of awareness on the recommended management of diarrhea and pneumonia. Key stakeholders and traditional leaders were engaged for concrete actions to remove local barriers for adequate prevention and care to be realized. In addition to that, taking cognizance of the fact that male partners/husbands play a critical role in influencing care seeking behaviors, KFP communication on diarrhea and pneumonia management was included in the ‘Husband Schools’. This was a UNFPA community based approach that targeted role model husbands and involved them in the support of reproductive health, family planning and the uptake of healthcare services in women and children. It allowed for local exchanges among health agents and men to contribute towards action planning oriented towards increasing health services utilization and therefore demand generation. The role model husbands were deemed most effective in encouraging and influencing other men in their communities to take up recommended preventive and curative care seeking behaviors. Also, in July of 2014, UNICEF launched a campaign for the distribution of the Zinc/ORS co-pack, which presented an opportunity for strengthening service demand through auto-referral ticket/coupon distribution and communication on free of charge access to health services for children in the household. This distribution was done through community volunteers (‘Relais’). Monitoring of the recovery of these coupons showed that caregivers were using them at the health facilities to seek care.
where their children were sick. An 18% to 27% usage of these coupons was reported in March 2015.

**The Effectiveness of the Demand Generation Activities**

From the data generated by both the program as well as the external evaluation, it appears that there are a couple of improvements observed.

**a. Improvements in the Levels of Awareness on these Diseases**

The study sought to explore the sources of information about the appropriate treatment of diarrhoea and pneumonia from caregivers in order to ascertain whether sources of awareness were credible. As shown below, a significant proportion of the caregivers mentioned frontline health workers (85%) as their main source of information on pneumonia and diarrhoea, which was an indication that the demand generation activities were most effective through this channel.

In addition to that, almost half of the caregivers (42%) reported that frontline health workers had visited them at the households where they were provided with information about the appropriate management of diarrhoea and pneumonia as shown below.
The evaluation explored to confirm this with the caregivers and the caregivers were asked to mention the things that they would look out for to judge whether the diarrhoea their child was suffering from was mild or more serious enough for them to seek immediate medical attention. From the findings, it was observed that most of the caregivers are able to identify various signs and symptoms – with the most commonly mentioned ones being how watery their child’s stool is and the energy levels of the child.

### Things you look for to judge whether the diarrhoea your child is suffering is mild or more serious enough for you to seek immediate medical attention.

<table>
<thead>
<tr>
<th>Department</th>
<th>Total (386)</th>
<th>Madarounfa (86)</th>
<th>Matameye (90)</th>
<th>Mayahi (105)</th>
<th>Mirriah (105)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>How watery the stool is</strong></td>
<td>25%</td>
<td>19%</td>
<td>29%</td>
<td>25%</td>
<td>28%</td>
</tr>
<tr>
<td><strong>The child’s energy level</strong></td>
<td>20%</td>
<td>21%</td>
<td>18%</td>
<td>12%</td>
<td>28%</td>
</tr>
<tr>
<td><strong>The frequency of bowel movements</strong></td>
<td>13%</td>
<td>19%</td>
<td>3%</td>
<td>27%</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Whether vomiting or has fever</strong></td>
<td>12%</td>
<td>24%</td>
<td>4%</td>
<td>17%</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Whether blood in the stool</strong></td>
<td>9%</td>
<td>2%</td>
<td>9%</td>
<td>3%</td>
<td>21%</td>
</tr>
<tr>
<td><strong>The smell of the stools</strong></td>
<td>8%</td>
<td>6%</td>
<td>16%</td>
<td>10%</td>
<td>2%</td>
</tr>
<tr>
<td><strong>The colour of the stools</strong></td>
<td>6%</td>
<td>7%</td>
<td>8%</td>
<td>2%</td>
<td>9%</td>
</tr>
<tr>
<td><strong>Whether the child has pains</strong></td>
<td>5%</td>
<td>2%</td>
<td>9%</td>
<td>2%</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Whether child is eating/drinking normally</strong></td>
<td>1%</td>
<td>-</td>
<td>1%</td>
<td>1%</td>
<td>-</td>
</tr>
<tr>
<td><strong>Whether the child’s eyes are sunken and hollow</strong></td>
<td>1%</td>
<td>-</td>
<td>1%</td>
<td>-</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Whether the child’s skin shrinks or is wrinkled</strong></td>
<td>1%</td>
<td>-</td>
<td>2%</td>
<td>1%</td>
<td>-</td>
</tr>
</tbody>
</table>

However, the level of awareness of other critical symptoms was found to be low. Examples of symptoms that received low or no mentions included the frequency of the bowel movements, bloody stool, wrinkled or shrivelled skin as well as loss of appetite.

With regard to the levels of awareness of pneumonia symptoms that would lead to immediate seeking of medical attention, it was observed that, a sizeable number of caregivers could identify critical symptoms for seeking immediate care among them including high fever (58%), a cough that produced yellowish or green mucus (26%) and fast and difficult breathing in the child (26%).
However, there were relatively low mentions of other critical symptoms such as chest drawing (mentioned by only 19%) as shown below. This notwithstanding, only a small proportion of the caregivers indicated that they did not know of any signs (1%).

<table>
<thead>
<tr>
<th>What symptoms of Pneumonia would make you seek immediate medical attention for your child under the age of 5 years?</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>The child had a high fever</td>
<td>386</td>
</tr>
<tr>
<td>The child had a cough that produced yellowish or green mucus</td>
<td>26%</td>
</tr>
<tr>
<td>The child had fast or difficulty breathing</td>
<td>26%</td>
</tr>
<tr>
<td>The child was drawing their chest</td>
<td>19%</td>
</tr>
<tr>
<td>The child was vomiting</td>
<td>17%</td>
</tr>
<tr>
<td>Other signs and symptoms</td>
<td>15%</td>
</tr>
<tr>
<td>The child was weak and docile</td>
<td>10%</td>
</tr>
<tr>
<td>The child had chest pains</td>
<td>10%</td>
</tr>
<tr>
<td>The child was sweating or had chills</td>
<td>2%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>1%</td>
</tr>
</tbody>
</table>

b. **Improvements in Care Seeking Behaviour**

From the study findings, there seemed to have been an increase in the level of care seeking behaviours among the caregivers following the implementation of the program as reported by key contacts interviewed during the evaluation process. Caregivers are now more aware of the benefits of early care seeking as shown below.

“There a lot of awareness campaigns, training and community relay. The mothers know the symptoms and they immediately come to the health centres as soon as they notice it” **Region in charge of Health, Zinder**

“…the guardians and mothers are more aware because they have seen that timely care seeking is more effective… it is easy to treat a child when the condition is not very serious…it is very easy if you arrive on time; the problem is identified and the child is well taken care of and cured” **Private Partner, Zinder**

Subsequently, it was noted that in addition to that to creation of awareness on the need for care seeking for diarrhoea and pneumonia cases, emphasis was also placed on the need for observing prevention measures of these illnesses as shown below.

“Through the IYCF (Infant Feeding and Young Child) we transform information progressively to the mothers and guardians… in fact; we only talk about prevention with these mothers” **Region in charge of Health, Zinder**

As a result of increased knowledge on prevention measures, the cases of diarrhoea and pneumonia for children under 5 years attended to at the health facilities were reported to have reduced as shown below.
“…in total in 2015…33,586 cases of children between 0 to 5 years with diarrhoea were treated. This was less than in 2014 where we attended to 42, 544 cases.” Region in charge of Health, Zinder

“The program contributed to a change in the number of under 5 years’ children treated with diarrhoea…Of course… like in mentioned previously, when we did a comparison between 2013, 2014 and 2015, we have observed that the figures are becoming lower than previous years” Frontline Health Workers’ Manager, Mirriah

“We have seen a reduction in the number of cases reported for pneumonia and diarrhoea….In addition to that, mothers are more prompt to seek care when they see the first signs of diarrhoea for example and we have a chance to prevent more severe forms of the disease” District/Department in charge of Health, Mirriah

The evaluation sought to affirm these findings from the caregivers. When asked whether their children under the age of 5 years had suffered from diarrhoea within the last 3 months preceding the data collection process, 82% of the caregivers indicated that their children had experienced an episode of diarrhoea and shown below. This was reported consistently in the four intervention districts/ departments.

### Has any of your child/children suffered from diarrhea within the last three months?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total (386)</td>
<td>82%</td>
<td>18%</td>
</tr>
<tr>
<td>Madarounfa (86)</td>
<td>84%</td>
<td>16%</td>
</tr>
<tr>
<td>Matameye (90)</td>
<td>79%</td>
<td>21%</td>
</tr>
<tr>
<td>Mayahi (105)</td>
<td>73%</td>
<td>27%</td>
</tr>
<tr>
<td>Mirriah (105)</td>
<td>93%</td>
<td>7%</td>
</tr>
</tbody>
</table>

On care seeking for the most recent episode of diarrhoea experienced, caregivers indicated that they largely took the child to a health facility (38%) or to a community health worker (34%). This was reported consistently across the four districts of intervention as shown below. However, a sizeable number of caregivers (14%) indicated that they gave their child home remedies to relieve the diarrhoea episode, or that they did not do anything (6%). This was especially reported in Madarounfa and Mayahi districts.
This was an indication that there could be existing barriers to care seeking behaviours that were yet to be addressed. One of these could have been the lack of financial empowerment for the caregivers or the existing social norms where consent from the spouse was required before money could be spent on child health care. As shown below, decisions on how money was spent in the household were mainly made by the spouse (74% of caregivers reported this).

With regard to care seeking behaviour for pneumonia, it was observed that a significant number of the caregivers (85%) sought medical attention from a health facility or from medical personnel on the most recent episode of pneumonia that their child had as shown below. However, a sizeable number of respondents (15%) reported that they did not seek medical attention, an indication that more efforts were required for effective behaviour changes in the seeking of treatment for pneumonia.
For caregivers that indicated that they sought medical attention, the study sought to find out how long this had taken them. As shown below, majority (62%) indicated that they sought medical attention immediately, and more so, in Matameye. A number of the caregivers however indicated that they waited for a few hours before seeking medical attention (27%) or for a day or longer (12%) before seeking medical attention as shown below. This was reported in Madarounfa, Mayahi and Mirriah, and was indicative of existing knowledge gaps on the need to seek for immediate medical attention for pneumonia cases in children less than 5 years.

![Graph showing the duration of medical attention sought for pneumonia cases]

For Pneumonia - How long did it take you before seeking medical attention?

<table>
<thead>
<tr>
<th>Duration of Medical Attention Sought</th>
<th>Total (386)</th>
<th>Madarounfa (86)</th>
<th>Matameye (90)</th>
<th>Mayahi (105)</th>
<th>Mirriah (105)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sought medical attention immediately</td>
<td>85%</td>
<td>90%</td>
<td>84%</td>
<td>79%</td>
<td>89%</td>
</tr>
<tr>
<td>Waited for a few hours before seeking medical attention</td>
<td>10%</td>
<td>10%</td>
<td>16%</td>
<td>21%</td>
<td>11%</td>
</tr>
<tr>
<td>Waited for a day or two before seeking medical attention</td>
<td>15%</td>
<td>10%</td>
<td>16%</td>
<td>21%</td>
<td>11%</td>
</tr>
</tbody>
</table>

The study also explored the level of awareness for products used in the management and treatment of diarrhoea amongst the caregivers. It was noted that 88% of the caregivers in total are aware of ORS. A significantly lower number of caregivers were however aware about Zinc.

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c. **Improvements in the Awareness of Products Used to Manage these Diseases**

The study also explored the level of awareness for products used in the management and treatment of diarrhoea amongst the caregivers. It was noted that 88% of the caregivers in total are aware of ORS. A significantly lower number of caregivers were however aware about Zinc.
(36%) and the ORS/co-pack (13%) as shown below. Interestingly, a sizeable number of caregivers (6%) reported that they were aware of none, and this trend was observed across the four intervention districts.

When asked about their sources of information, majority of the caregivers (87% overall) reported that they got to know about ORS from doctors/medical officers/ nurses in a public health facility. This trend cut across the three intervention regions. A minimal number of caregivers in contrast indicated that they learnt about ORS from a frontline health worker (11%), and more so, in Matameye and Mirriah.

The same trend was observed in the source for information about zinc. As shown below, majority of the caregivers (75%) also reported having known about Zinc from a doctor/medical officer/nurse in a public health facility. Similar ORS, a sizeable portion of caregivers (22%) also
reported having received this information from frontline health worker, and more so, in Matameye and Mirriah districts.

Consequently, and similar to the trend observed for ORS and Zinc, a significant number of caregivers (69%) also reported having learnt about the ORS/Zinc co-pack from doctors/medical officers/ nurse in a public health facility, and more so in Madarounfa and Mayahi. In addition to that, a sizeable number of caregivers (24%) also reported that they learnt about the product from a frontline health worker. This was especially the case in Matameye and in Mirriah, where the impact of awareness creation of the ORS/Zinc co-pack was more effective through the frontline health workers.

In addition to that, in Matameye district, it was observed that the awareness creation of this product was mainly through the frontline health workers and through doctors/nurses/ medical officers in a private health facility. There were no mentions of doctors/ medical officers/ nurses in a public health facility, which could have been an indication that the public health facilities in the district did not have the ORS/Zinc co-pack in stock. Similarly, in Madarounfa, all caregivers interviewed indicated that doctors/ medical officers/ nurses from a public health facility were their source of information. This was an indication that this product was only available in public health facilities.
The evaluation also sought to find out when the caregivers got to know about these products in order to ascertain whether the activities carried out under the program contributed to the increase in awareness on the appropriate treatment of diarrhoea and pneumonia. As shown below, majority of the caregivers reported having known about ORS and zinc within the period the program was implemented. Interestingly however, a sizeable number of respondents (47% and 40% for ORS and zinc respectively) reported having known about ORS and zinc prior to the implementation of the program (over 3 years ago). This was an indication that there could have been other awareness campaigns carried out prior to the program implementation.
A similar trend was observed for the ORS/Zinc co-pack where majority of the caregivers reported having come to know about the product within the period the program was implemented as shown below. Similar to the trend observed for ORS and Zinc, a sizeable number of caregivers (6%) also reported to have come to know about the ORS/Zinc co-pack for a longer period than the time the program was implemented in the country. Interestingly also, very few caregivers indicated that they knew about the product in Madarounfa and Matameye (only 2 caregivers in each district). This was indication that there was either very low effort to educate the public about the ORS/Zinc co-pack or that they product was newly introduced in the districts.

![Diagram showing how long ago caregivers got to know about ORS/Zinc Co-Pack](chart.jpg)

Similar to diarrhoea, the study also explored the level of awareness on the products used for treating pneumonia in children under the age of 5 years among the caregivers. As shown below, there was very low level of awareness of Amoxil as the treatment for pneumonia with only 27% of the caregivers mentioning it. Low mentions of Amoxil were especially observed in Madarounfa and Mayahi. Medicines that seemed to be widely known for treating pneumonia in children less than 5 years were paracetamol (mentioned by 69% of the caregivers), cough syrup (mentioned by 62% of the caregivers) and Cotrimoxazole (mentioned by 59% of the caregivers). These mentions were consistent across the four intervention districts.
When asked about their source of information, majority of the caregivers (74%) reported that they had received this information from a doctor/medical officer/nurse in a public health facility as shown below. This trend cut across the four intervention districts, and more so in Madarounfa and Marahi districts. Interestingly, a sizeable number of caregivers also reported that they learnt about the product from a frontline health worker (22%). This was especially the case in Mirriah, Matameye and Madarounfa.

With regards to the period that caregivers got to know about Amoxicillin, majority of the caregivers (60%) reported that they got to know about the product more than 3 years ago preceding the data collection period, and more so, in Matameye and Mirriah districts. This was
an indication that there could have been supply of this product in the market prior to the program coming into existence in Niger, and also that there could have been awareness campaigns carried out to promote it. Consequently, this could have been as a result of the caregivers confusing the amoxicillin dispersible products with the other forms of the product that have been in existence for a longer period.

d. **Improvements in the Level of Usage**

In addition to that, to investigating the level of awareness of the products used for the treatment of pneumonia and diarrhoea, the study also sought to understand the level of their usage amongst the caregivers. As shown below, there was a high level of usage of ORS amongst the caregivers with 92% of caregivers across the four intervention districts indicating that they had ever used it. In contrast however, very low numbers were reported for the use of Zinc (36% usage) and the ORS/Zinc co-pack (13% usage). This notwithstanding, a significantly high usage of Zinc was reported in Matameye (70%) and Mirriah (62%). Also, a sizeable number of caregivers also reported using the ORS/Zinc co-pack in Mayahi (23%) and Mirriah (19%).
When asked about the time they started using the products, a sizeable number of the caregivers that had reported ever having used ORS (41%) indicated that they started using the product more than 3 years ago, a period before the program was implemented. This was especially reported in Matameye (70%) and Mirriah (66%). Majority however indicated that they had started using the product within the period the program was implemented. This was an indication that the usage could have resulted from the awareness activities carried out during the program. A similar trend was observed in the usage of Zinc, where, a sizeable number of caregivers (34%) indicated that they had started using Zinc for a period prior to the implementation of the program. Again, this trend was observed mainly in Mirriah (40%) and Matameye (35%). Majority however indicated that they started using the product within the period the program was implemented.
In contrast, only a small proportion of the caregivers (7%) reported that they had started using the ORS/Zinc co-pack for a period longer than when the program was implemented. As shown below, majority indicated that that had started using the product within the program implementation period, and more so, within the last 3 months preceding the data collection processes. This was especially the case in Madarounfa (100%) and in Mayahi (54%) districts as shown below. This was an indication that this was a newly introduced product in the market.

When asked about the top likes about ORS, caregivers reported that they liked the product because children caregivers faster to treatment (65%), and more so in Matameye (99%) and Mirriah (95%). Further, the caregivers liked this product because it was affordable (34%) - especially in Mayahi (52%) and Madarounfa (47%), and because it was readily available (15%), more so, in Madarounfa (28%) and Mayahi (17%). Additionally, the caregivers indicated that they did not like the product because it had bad taste (55%), was not readily available (31%) - especially in Mayahi (48%) and the fact that it was expensive (5%) - especially in Matameye (18%).
Similarly, caregivers reported that they mainly liked zinc because children responded faster to treatment (92%), had no side effects (27%), and because it tasted good (24%). In addition to that, caregivers also indicated that they mainly did not like zinc because it was not readily available (45%) - especially in Mirriah (60%).

With the co-pack on the other hand, caregivers reported that they mainly liked it because children responded faster to treatment (67%), was affordable (30%), and more so in Mayahi (56%) and the fact that is caused no side effects (4%). Additionally, caregivers indicated that they did not like the co-pack because it was not readily available (41%) - and more so in Mirriah (60%), had a bad taste (9%) and because children were perceived not to respond faster to treatment (9%).
For pneumonia, majority of the caregivers (61%) indicated that they started using amoxicillin over 3 years prior to the carrying out of the study as shown below.

When asked about the likes and dislikes of amoxicillin, caregivers reported that they mainly liked the product because children responded faster to treatment (92%), was readily available (26% of the caregivers, and more so in Mayahi), and because it caused no side effects (26%). With regards to the dislikes about the product, majority of the caregivers indicated that they mainly disliked the product because of its bad taste (49%), was expensive (29%, and more so in Matameye), and because it was not readily available (20% of the caregivers, and more so, in Matameye- 22%- and Mirriah- 21%).
e. Level of Preparedness for Future Episodes of Diarrhoea and Pneumonia

Noting the issues of availability of essential medicines for the management of pneumonia and diarrhoea, the study sought to assess the level of preparedness for the caregivers for future episodes of diarrhoea and pneumonia. It was observed that 49% of the caregivers did not have any product that could be used for the management of diarrhoea in their households. Only 4% have the ORS/Zinc co-pack in their household, which signifies the need for intensified effort to scaling up demand and supply.

For pneumonia on the other hand, the same trend was observed; 45% of the caregivers indicated that they did not have any product in the household to manage a future episode of pneumonia in their children under the age of 5 years. In addition to that, while the re-use of Amoxil or the
use of antibiotics purchased over the counter is discouraged, it was interesting to note that a proportion of the caregivers still keep left over antibiotics for future use. A sizeable number of caregivers (33%) reported that they had paracetamol, 22% reported that they had cotrimoxizole while 18% had cough syrup for managing future episodes of pneumonia.

<table>
<thead>
<tr>
<th>None of the above</th>
<th>Paracetamol</th>
<th>Cotrimoxizole (Bactrim)</th>
<th>Cough syrup</th>
<th>Amoxicillin (Amoxil)</th>
<th>Nivacun</th>
<th>Other or Unknown Antibiotic</th>
<th>Coartem</th>
<th>ORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>45%</td>
<td>33%</td>
<td>22%</td>
<td>18%</td>
<td>9%</td>
<td>2%</td>
<td>1%</td>
<td>9%</td>
<td>1%</td>
</tr>
<tr>
<td>Total (386)</td>
<td>Madarounfa (86)</td>
<td>Matameye (90)</td>
<td>Mayahi (105)</td>
<td>Mirriah (105)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Efficiency of the Demand Generation Activities in Niger**

From the findings of the study, it was clear that the demand generation activities were carried out through participatory approaches where UNICEF in collaboration with the government and other stakeholders designed and implemented demand generation activities that were deemed effective. In addition to that, taking cognizance of fact that dialogue and social learning were found to be effective channels in driving behaviour change, the community, mainly through volunteers, was actively involved in driving behaviour change. UNICEF spearheaded the implementation of continuous community based monitoring which allowed communities to make their own analysis and identify local bottlenecks that were affecting them- including access to quality health care for the treatment of diarrhea and pneumonia- as well as identifying feasible solutions for adoption. This process has enabled communities to share and analyze knowledge, as well as to plan and to act. During diagnostic censuses for example, the most common issues raised were those related to common diseases (such as diarrhea, pneumonia and malaria). Analysis of these issues enabled communities to understand the link between usual practices, such as improper waste disposal, poor personal hygiene and nutrition, and the prevalence of these diseases. It also stimulated people to genuine behavior change through commitments.
materialized through the development of a village action plan. An implementation monitoring team was put in each village involving the village chief, the health workers and community volunteers for continuity. Nevertheless, the need to ensure that communities are enabled to resolve emerging issues/ barriers is important for sustainability. Access to basic amenities- such as latrines and clean water- for instance was cited as challenges barring prevention practices of diarrhea and pneumonia illnesses in children under the age of 5 years.

In addition to that, noting that poverty and subsequent financial constraints in the households were some of the key barriers towards access to healthcare, UNICEF incorporated the distribution of auto-referral ticket/ coupon distribution and communication on free of charge access to health care services for children in the household during the distribution campaign for the ORS/Zinc co-pack. This was done through community volunteers and saw an 18% to 27% usage of these coupons in access to healthcare. However, noting that the targeted districts were largely rural, and were therefore likely to have few or no health facilities close by, the need to ensure adequate coverage of the frontline health workers is key. The long distances to the health facilities were cited as a key challenge barring access to healthcare by the caregivers (33%). In addition to that, only less than half of the caregivers (42%) indicated that they had been visited by a frontline health worker at the household, which was an indication that the coverage of the frontline health workers was limited.

**Sustainability of the Demand Generation Activities in Niger**

A lot of work was noted that contributed to the generation of demand in Niger. All the same, a few things threaten sustainability of these activities.

**a. Need for Demand Generation Activities Targeting All Household Members**

As indicated, social norms play a key role in affecting care-seeking behaviours for children under the age of 5 years. It is notable that care giving is primarily a task left to the mothers, grandmothers or other female relatives. As shown below, the involvement of the fathers and other male guardians in the demand generation activities held during the program implementation was rare.

“We have different categories of caregivers sometimes we have mothers, grandmothers, other female guardians, but it is mostly it is the grand mothers and the mums. Fathers’ involvement is rare… for the activities we held for instance; the attendance of fathers was cases.” *Frontline Health Workers’ Manager (ECD), Matameye*
This notwithstanding, the decisions on how money is spent within the household— including access to health care. As indicated in the preceding sections, 74% of the caregivers reported that decisions on how money is spent in the household are mainly done by their spouses. The involvement of the male spouses/guardians in demand generation was therefore important. It is noteworthy that efforts were made to involve the male spouses/guardians through UNICEF riding on the UNFPA community based approach of ‘Husband Schools’ where KFP (Key Family Practices) communication on diarrhoea and pneumonia was included. Nevertheless, it was notable that local volunteers who carried out regular group discussions with the populations as well as face-to-face interpersonal discussions on KPFs were mostly women. In order to assure the effective adoption of recommended KFPs in the management of diarrhoea and pneumonia for children under the age of 5 years, it is essential to cultivate the need and support of men in the community to increase social transformation and contribute towards redefining gender roles and social norms. Involvement of men in children’s care increases engagement and better balance in gender roles for continued sustainability.

b. Challenges of finances, Hygiene and, Long Distances in accessing care

Taking note of the fact that one of the expected results under demand generation was to have strategies prioritized to reduce non-financial and financial barriers to treatment for caregivers, the study sought to understand the key challenges that caregivers were facing during care seeking for treatment of diarrhoea and pneumonia for their children under the age of 5 years. It is noteworthy that UNICEF spearheaded the implementation of continuous community based monitoring which allowed communities to make their own analysis and identify local bottlenecks that were affecting them— including access to quality health care for the treatment of diarrhoea and pneumonia— as well as identify feasible solutions for adoption. Whist this was in effect and may have worked to resolve some of the barriers towards the access of care, others remain unresolved to some extent.

First, one of these challenges cited by caregivers as barring access to health care services was the lack of finances to pay for treatment for children under the age of 5 years (reported by 33% of the caregivers). It is however notable that through the program, some of the financial burden incurred during care seeking was reduced by bringing the services closer to the population as reported below.
“... because of the program which is actually at the grass roots and near to the people, certain expenses are reduced. Because someone who is moving to find healthcare services tends to spend more; but we bring the products to the health centres and ... down to health posts so accessibility is closer to the population; therefore, some expenses are reduced” Frontline Health Workers’ Manager, Mirriah

In addition to that, the auto-referral ticket/ coupon distribution for enabling caregivers to access healthcare for their children free of charge also provided some reprieve. This notwithstanding, the cost of care continues to be a key barrier to accessing health services for children under 5 years. In Matameye and Mirriah districts for instance, a significantly high number of caregivers (76% and 44% respectively) cited this challenge as shown below, an indication that more efforts to reduce this burden are needed. It is noted that poverty is rampant in Niger and other basic needs may be taking precedence over the need to seek for health care services. Also, social norms could be a contributing factor, where the male spouse largely makes decisions on how money is spent in the household- including money for accessing treatment. In addition to that, and as indicated in the preceding sections, though access to treatment for children under 5 years is free of charge in the country, there are systemic issues that hinder the gains of this policy change from being realized. Health facilities do not have financial autonomy to sustain the free services offered and these services end up being availed at a fee or are completely unavailable. These gaps would need to be addressed for more sustainability of the gains made through the implementation of the program.

<table>
<thead>
<tr>
<th>Key Challenges Faced by Caregivers in seeking Healthcare services for Diarrhoea and Pneumonia</th>
<th>Total</th>
<th>Madarounfa</th>
<th>Matameye</th>
<th>Mayahi</th>
<th>Mirriah</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of money for treatment</td>
<td>33%</td>
<td>8%</td>
<td>76%</td>
<td>5%</td>
<td>44%</td>
</tr>
<tr>
<td>Lack of proper hygiene i.e. clean water, Latrines etc.</td>
<td>19%</td>
<td>23%</td>
<td>6%</td>
<td>25%</td>
<td>21%</td>
</tr>
<tr>
<td>The distance to the health facility is far</td>
<td>17%</td>
<td>12%</td>
<td>24%</td>
<td>10%</td>
<td>22%</td>
</tr>
<tr>
<td>Lack of awareness concerning health matters</td>
<td>7%</td>
<td>17%</td>
<td>4%</td>
<td>5%</td>
<td>2%</td>
</tr>
<tr>
<td>No means of transport due to poor roads</td>
<td>5%</td>
<td>10%</td>
<td>3%</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td>Lack of drugs</td>
<td>4%</td>
<td>5%</td>
<td>1%</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>Lack of time due to many responsibilities</td>
<td>4%</td>
<td>3%</td>
<td>-</td>
<td>9%</td>
<td>2%</td>
</tr>
<tr>
<td>Inadequate facilities in the community</td>
<td>2%</td>
<td>2%</td>
<td>-</td>
<td>1%</td>
<td>3%</td>
</tr>
<tr>
<td>Congestion in health facilities resulted in delayed services</td>
<td>1%</td>
<td>1%</td>
<td>-</td>
<td>1%</td>
<td>-</td>
</tr>
<tr>
<td>Ignorance to get treatment</td>
<td>1%</td>
<td>1%</td>
<td>-</td>
<td>1%</td>
<td>-</td>
</tr>
<tr>
<td>Hostility from some medical personnel</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1%</td>
</tr>
<tr>
<td>Lack of support from (health organisation sectors, partners and leaders)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1%</td>
</tr>
<tr>
<td>N/A</td>
<td>13%</td>
<td>8%</td>
<td>7%</td>
<td>32%</td>
<td>3%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>1%</td>
<td>-</td>
<td>-</td>
<td>2%</td>
<td>-</td>
</tr>
<tr>
<td>None</td>
<td>2%</td>
<td>8%</td>
<td>1%</td>
<td>-</td>
<td>1%</td>
</tr>
</tbody>
</table>

Secondly, and as shown above, caregivers cited the lack of proper hygiene as being one of the challenges faced in the management of diarrhoea and pneumonia health care services. It is
notable that during the demand generation activities, the program in Niger was implemented alongside other healthcare initiatives among them including hygiene and environmental sanitation. Through these initiatives were able to make linkages between usual practices (such as personal hygiene) and the prevalence of these diseases (diarrhoea and pneumonia). Though creating this awareness is essential, the communities would need to be further equipped with the easy access of amenities that would facilitate the observance of personal hygiene for instance- through the building of latrines and easy access to clean water- for more impact and sustainable results.

Thirdly, though it was notable that the frontline health workers had been the most effective with cascading information about diarrhea and pneumonia management to the caregivers, and that almost half of the caregivers had received a visitation from a frontline health worker at the household; there is a need to scale up access to treatment through this channel. A sizeable number of caregivers (17%) still face challenges accessing treatment from a facility because of the long distances and more so in Matameye (24%) and Mirriah (22%).

### 6.4.3 Improving Service Delivery in Niger

The service delivery activities were aimed at supporting Niger scale up the implementation of the Integrated Management for Childhood Illnesses (IMCI) in primary health facilities and Integrated Community Case Management (iCCM) in underserved areas. The service delivery activities were geared towards expanding access to effective integrated treatment services for diarrhoea and pneumonia at community and front-line health facility level and further generate local evidence that would inform policy on the treatment of childhood pneumonia by CHWs.

**The Need for the Service Delivery Component**

As indicated in the preceding sections, the under-five child mortality rate in Niger is one of the worst in the world, with diarrhea and pneumonia being among the leading contributors of the post-neonatal deaths. Studies have continued to show that this is because of a number of factors among them including limited access to healthcare services. In addition to that to medical facilities being limited in the country, the lack of reimbursement of the cost of care provided to children and women in the health facilities further limits the financial autonomy of these structures and affects the quality of care offered. Subsequently, social norms further aggravate the situation where many people turn to local/ traditional healers when they fall ill. Against this
background, innovative steps were required to enhance service delivery in the country. The Diarrhea and Pneumonia Initiative in the country was implemented alongside other interventions in response to this situation. The service delivery aspects of the implemented program had the following expected results:

a) Having providers trained on appropriate management of diarrhoea and pneumonia
b) Having providers equipped with appropriate equipment, materials and supplies
c) Having frontline health workers appropriately monitored on a regular basis
d) Having supervisors motivated to conduct regular, ongoing supportive supervision for frontline providers
e) Having standardized operating procedures for supervision of integrated case management

**Activities Conducted Under the Program to Improve Service Delivery**

The service delivery component of the program was mainly implemented through the IMCI and iCCM as discussed below.

**a. Selection of Frontline Health Workers, Training and Equipment with materials**

To achieve these results, a number of activities were carried out which included the deployment and training of frontline health workers on integrated case management. About 1,965 community health workers (CHWs) were reported to have been deployed by March 2015 with 215 undergoing training on Integrated Community Case Management (iCCM) on diarrhea and pneumonia in the four target districts. In addition to that, 74 clinicians/nurses were also trained on iCCM and were taken through an Integrated Management of Childhood Illnesses (IMCI) course, which included both initial skill acquisition and skill reinforcement. Periodic supervision visits that were guided by standardized supervision procedures were also made by teams trained on iCCM and IMCI case management to help in the transfer of knowledge and skills learnt through the course to day-to-day activities at the health providers’ places of work. Supervision visits and evaluation of achievements made were done jointly by the MOH and UNICEF and performances were expected to contribute to the national outcome for achieving the MDGs. As of March 2015, all recruited and trained CHWs were reported to have been supervised within a period of 3 months. In addition to that, regular support was reported to have been provided to the district management teams to ensure close supervision monitoring of activities. For this
purpose, UNICEF recruited one national consultant located in Maradi for specific technical support of the four project districts. To facilitate the health workers also, health information management tools (training manuals and stock forms) were also printed and distributed in order to strengthen data collection and analysis at both the health centres and health huts for informing future improvements in the processes implemented. Further, to strengthen processes of service delivery at the local level, regular meetings with municipalities were organized in order to engage them on KFPs for prevention and care of diarrhoea and pneumonia. Village assemblies were also organized for the recruitment of community volunteers, village chiefs, religious leaders, women leaders and youth leaders. These were involved in the management of community-based prevention and care of diarrhoea and pneumonia interventions.

b. **Gender of the frontline health workers**

Taking cognizance of the fact that majority of the frontline health workers trained were female (since traditionally the issue of childcare is still regarded as a female affair and therefore attracting more female in the provision of healthcare for children), the study also sought to investigate whether the gender of the service providers played a role in impacting care seeking behaviour. As shown below, frontline health workers were mainly reported to be female (71%) across the four districts of intervention. Nevertheless, a sizeable number (29%) were found to be male. This was especially the case in Madarounfa (44%) and Mayahi (42%) as shown below.

Interestingly however, when asked about their preferences for the gender of the health workers serving them, majority of the caregivers (82%) indicated that they would prefer to be attended to by more female health workers. This trend cut across the four intervention districts, and more so, in Matameye (86%) and Madarounfa (85%).
Upon further investigation of this preference, it was found that caregivers perceived female health workers to be more understanding (44%) and able to relate to the problems of the caregivers (22%) more as shown below.

<table>
<thead>
<tr>
<th>Reasons for Preferring Female Health workers</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>They are understanding and friendly</td>
<td>44%</td>
</tr>
<tr>
<td>They relate to our problems</td>
<td>22%</td>
</tr>
<tr>
<td>They are more informed</td>
<td>11%</td>
</tr>
<tr>
<td>They are the largest number available i.e. very close to us</td>
<td>9%</td>
</tr>
<tr>
<td>They are more responsible at work</td>
<td>4%</td>
</tr>
<tr>
<td>Respond very fast and are always available</td>
<td>4%</td>
</tr>
<tr>
<td>They are very humble</td>
<td>4%</td>
</tr>
<tr>
<td>No reason</td>
<td>2%</td>
</tr>
<tr>
<td>Never seen any</td>
<td>-</td>
</tr>
<tr>
<td>Don’t know</td>
<td>-</td>
</tr>
</tbody>
</table>

The need to look into gender aspects in service delivery may be worth looking into in order to encourage continuous care seeking behaviour. This notwithstanding, communities seem to be largely relating well with the frontline health workers in general as indicated below (84%).
c. **Supervision and Support for the Frontline Health Workers**

It was noted that supervision visits and evaluation of achievements for the frontline health workers were made regularly and that these were made are done jointly by the MOH and UNICEF. As of March 2015, all recruited and trained CHWs were reported to have been supervised within a period of 3 months. In addition to that, regular support was reported to have been provided to the district management teams to ensure close supervision monitoring of activities. For this purpose, UNICEF recruited one national consultant located in Maradi for specific technical support of the four project districts. Supervision was reported to be guided by established guidelines where the key objective was to identify challenges and offer support as reported below.

“There are procedures we follow during supervision. The main objective is to identify the key bottlenecks in service delivery and offer support. We also recommendations and look out for improvements in the next visit…” **Frontline Health Workers Manager, Matameye**

“Yes, because when we go for supervision, we take these support points with us. We especially look for the number of cases treated and the availability of the drugs at the centers. We also monitor the awareness sessions to determine the number of people that have been sensitized on pneumonia and diarrhea…” **Frontline Health Workers Manager, Matameye**

Frontline health workers were found to be appreciative of the supervision efforts as they were able to improve their skills in service delivery as reported below.
“Supervision is very helpful because if you are not supervised, even if you have the courage to work you will not be able to because there is no follow-up. But if the supervisors come, they encourage us to do better”. *Frontline Health Worker, Madarounfa*

However, there seems to have been a disconnect in the supervision in the private sector. As reported by one of the private partners involved in the program, no supervision had been done since the training was done. This was indicative of gaps in addressing service delivery challenges occurring in the private sector and offering of required support for a more streamlined and effective approach in service delivery.

…*Since that training, you are the first person who visited me; no one has come since that time. Private Partner, Zinder*

**Effectiveness of the Improving Service Delivery Component in Niger**

The activities carried out under the service delivery component of this program were found to be effective as expounded below.

**a. Information on childhood disease management cascaded to the caregivers**

From the findings of the evaluation, it was found that health providers have been instrumental in cascading information on best practices for managing childhood diseases (including diarrhoea and pneumonia) amongst the caregivers. As shown below, 81% of the caregivers reported that they had obtained information on disease management for children under 5 years from frontline health workers/ community health workers.

<table>
<thead>
<tr>
<th>Department</th>
<th>Which of these have you ever used to obtain information on disease management for your children under 5 years?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frontline health worker/community health worker</td>
</tr>
<tr>
<td>Total (386)</td>
<td>81%</td>
</tr>
<tr>
<td>Madarounfa (86)</td>
<td>5%</td>
</tr>
<tr>
<td>Matameye (90)</td>
<td>16%</td>
</tr>
<tr>
<td>Mayahi (105)</td>
<td>8%</td>
</tr>
<tr>
<td>Mirriah (105)</td>
<td>90%</td>
</tr>
<tr>
<td><strong>Department</strong></td>
<td><strong>Total (386)</strong></td>
</tr>
</tbody>
</table>
In addition to that, the caregivers also reported that they trusted the frontline health workers/community health workers the most as their source of information as shown below (reported by 77% of the caregivers).

### Which of these do you trust the most?

<table>
<thead>
<tr>
<th>Source of Information</th>
<th>Total (386)</th>
<th>Madarounfa (86)</th>
<th>Matameye (90)</th>
<th>Mayahi (105)</th>
<th>Mirriah (105)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frontline health worker/community health worker</td>
<td>77%</td>
<td>81%</td>
<td>73%</td>
<td>89%</td>
<td>67%</td>
</tr>
<tr>
<td>Doctor/nurse/clinical officer</td>
<td>12%</td>
<td>2%</td>
<td>2%</td>
<td>1%</td>
<td>20%</td>
</tr>
<tr>
<td>Local leaders and elders in the community</td>
<td>5%</td>
<td>2%</td>
<td>2%</td>
<td>3%</td>
<td>8%</td>
</tr>
<tr>
<td>Radio</td>
<td>10%</td>
<td>2%</td>
<td>2%</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>Television</td>
<td>14%</td>
<td>8%</td>
<td>9%</td>
<td>1%</td>
<td>5%</td>
</tr>
<tr>
<td>Friends/family/neighbours</td>
<td>4%</td>
<td>4%</td>
<td>3%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>4%</td>
<td>1%</td>
<td>4%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Total</td>
<td>386</td>
<td>86</td>
<td>90</td>
<td>105</td>
<td>105</td>
</tr>
</tbody>
</table>

b. **Meeting Demand for Services at the local level**

Findings from data collected from caregivers, it was evident that health providers, and more so, frontline health workers, were perceived to have alleviated or lessened the challenges faced by caregivers in communities during care seeking. As shown below, 98% of the caregivers indicated that frontline health workers have been able to assist in the lessening of the challenges faced by caregivers during the management of child illnesses.

This notwithstanding, there is a need to scale up the level of contact with the caregivers for more effectiveness. Less than half of the caregivers (42%) have for instance been visited at the household to be educated about diarrhoea and pneumonia disease management as shown below.
Efficiencies within the Implementation of the Service Delivery Component

It was remarkable that supervision visits were made jointly with the MOH, which created efficiencies during the supervision visits. In addition to that, and with the objective of ensuring close supervision monitoring of activities, UNICEF recruited one national consultant to offer technical support in the four intervention districts. This model was found to be effective as the impact was felt on the ground as reported below.

“The training and follow ups made in this program have been very effective and have greatly improved the way we do things here… This program made things to improve”. District in charge of Health, Maradi

Sustainability of the Service Delivery Component

A few things that were observed that touch on the sustainability of the program in Niger included the following:
a. **Continuous application of knowledge**

It was noted that the training sessions that the frontline health workers were taken through were effective as they improved the knowledge levels for more effective service delivery due to the content that it covered. More cases could now be handled as a result as reported by one of the managers of the frontline health workers in Mirriah.

“The trainings we were taken through were very beneficial… they allowed us to master the skills needed for more effective case management… because of this, we are able to handle more cases of diarrhoea and pneumonia in the community…” **Frontline Health Workers’ Manager, Mirriah**

In addition to that, the frontline health workers carried out regular knowledge transfer sessions with the caregivers. As a result, the workers were able to impact knowledge to the caregivers while also gaining mastery of the skills themselves.

“In every morning, Monday to Friday, there is always an awareness session at the health centre and during this awareness it can be shown how to administer amoxicillin to a child. And, during the process, the agent takes care to give the first dose to the mother and tells her that when she arrives home, that’s how she should proceed” **Frontline Health Workers’ Manager, Mirriah**

b. **Limited Supervision of health workers**

Whist efforts were found to have been put in place to ensure regular supervision and support in the public sector, the same could not be said for the private sector. There seems to have been a lapse in the integration of supervision visits in the private sector as was evident from one of the private partners involved in the program (below). Taking cognizance of the fact that public health facilities are limited in Niger, the need to ensure the incorporation of the private sector in health interventions is key for a more streamlined approach in service delivery. This would also increase the chances for more sustainable results.

“…Since that training, you’re the first person who visited me; no one has come since that time.” **Private Partner, Zinder**

6.4.4 **The Supplies Management Component**

The supply management component of the program needed to first ensure that the recommended medicines for the treatment of diarrhoea and pneumonia were included in the list of essential drugs of the National Office of Pharmaceutical and Chemical Products (ONPPC).
The Need for the Implementation of the Supplies Management Component

At the time of implementing the program, the essential medicines for the treatment of pneumonia and diarrhoea (Amox DT, low osmolarity ORS and other drugs) had not been included in the list of essential drugs of the National Office of Pharmaceutical and Chemical Products (ONPPC) as indicated. This was therefore one of the key achievements that needed to be made. In addition to that, and as indicated in the preceding sections, the financial autonomy of health facilities was affected by lack of reimbursement for costs incurred during the provision of free health care services to children and women in the country. As a result, this affected the renewal of supplies of essential drugs needed for the effective management of illnesses, including treatment of pneumonia and diarrhea. Under the implemented Diarrhea and Pneumonia Treatment Initiative, the supply management aspect had the following expected results:

a) Having over the counter availability of zinc
b) Having frontline community health workers adequately stocked with ORS, zinc and amoxicillin
c) Having facilities adequately stocked with ORS, zinc and amoxicillin
d) Having a policy on community-based treatment of pneumonia in place
e) Having amoxicillin dispersible tables and ORS/zinc co-packs included in the Essential Lists of medicines in Niger
f) Having amoxicillin dispersible tablets and ORS/zinc co-packs products registered in the country
g) Having national procurement of amoxicillin and ORS/zinc co-packs meet projected needs

Supplies Management Activities Implemented Under the Program

To achieve the expected results, a number of activities were carried out. To begin with, the Ministry of Health (MOH) in Niger included amoxicillin dispersible, low osmolarity ORS and other drugs in the list of essential drugs of the National Office of Pharmaceutical and Chemical Products (ONPPC) as a result of advocacy from UNICEF. This was achieved through the close partnership that UNICEF has had with the Ministry, and particularly in the topic of child health. Also, UNICEF launched a Zinc/ORS Co-pack distribution campaign during ‘Child Survival weeks’ in Niger that aimed at improving access/ availability and correct treatment of diarrhea in families. This campaign took place in the four districts targeted under the Diarrhea and Pneumonia
Initiative. Villages that were given priority were those that were out of reach of a health facility (6km or more). In addition to that, reports indicated that there has been a continuous ordering and supply of essential commodities for the management of diarrhea and pneumonia in the 4 target districts, both using funding from UNICEF and other sources. A strategic partnership with Population Services International (PSI), an NGO that focuses on improving the availability and use of ORS/Zinc through engaging caregivers, paternal grandparents and community leaders, was for instance forged. A preliminary analysis of the impact of this strategic partnership showed that there was an increased interest from the communities in terms of participation and compliance during the implemented diarrhea and pneumonia campaigns.

Effectiveness of the Supplies Management Activities

It was notable that UNICEF worked with other partners, including MOH in the provision and distribution of the essential drugs for the treatment of diarrhea and pneumonia to meet the existing needs. During the distribution of the drugs in some instances, opportunities to create awareness amongst the communities on products distributed were sought as shown below.

“We had with an NGO called PSI under the aegis of UNICEF. We organized some weeks of activities whereby we gave packets of Zinc, ORS, and Aquatab. It was really a mass awareness campaign in 8 CSI of our district and the community was educated.” District in charge of Health, Matameye

In addition to that, the joint efforts in the distribution of supply of the essential medicines also seemed to have been effective. There were reports that whilst supply of the essential medicines to the health facilities and frontline health workers were made based on the stocks available, the needs on the ground were also put into consideration as shown below.

“The medicines are always in supply for frontline health workers based on their need because the districts share them based on the need of the health centres... this is also based on the stock” Regional in charge of Health, Maradi

This notwithstanding, cases of stock-outs and delays in supply were reported in some districts as shown below. The supply of Amoxicillin seems to have been the most affected.

“Amoxicillin supply should be improved because we often have shortage and sometimes we suddenly have problems to take care of the cases.” Frontline Health Worker, Mayahi

We normally experience delays in receiving Amoxicillin… we have never had a shortage of ORS or Zinc… District in charge of Health, Matameye

In addition to speaking to health providers, insights were also sought from the caregivers on challenges experienced during the acquisition of the essential medicines in the management of
diarrhoea and pneumonia. A number of challenges were reported by caregivers. For diarrhoea, key challenges included drugs not being readily available (reported by 47% of the caregivers, and more so in Mirriah where 68% indicated this as a challenge). In addition to that, long distances to the outlets where the drugs were available was also cited as a challenge (reported by 44% of the caregivers, and more so in Mayahi, where 67% of the caregivers indicated this as a challenge) as well as drugs being expensive (reported by 13% of the caregivers, more so in Matameye, where 20% of the caregivers reported this as a challenge). For Pneumonia, key challenges cited included drugs being expensive (reported by 38% of the caregivers, more so in Matameye, where 51% of the caregivers cited this as a challenge) as well as long distances to the outlets where the drugs were available (reported by 33% of the caregivers, more so in Mirriah- 36% and Matameye- 34%). In addition to that, the unavailability of the drugs was also cited as a challenge (reported by 30% of the caregivers, more so in Madarounfa and Mayahi (100% of the caregivers reported this as a challenge. It is worth noting that the numbers of caregivers citing this challenge were minimal- less than 5).

The study sought to investigate further in order to understand the challenges that were being experienced in the acquisition of specific products for the treatment of diarrhoea and pneumonia. With regards to ORS and as shown below, only 11% of the caregivers reported that they had tried to purchase the product and it was not available. This was reported to be largely within the last 3 months preceding the data collection process.
In addition to that, caregivers who had tried to purchase ORS and it was not available indicated that they had largely tried to purchase the same from a public health facility (88%) as shown below. This cut across the four districts of intervention.

When asked about the frequency of the unavailability of ORS, most of the caregivers (52%) reported that this had happened only once. In addition to that, the caregivers reported that the situation seemed to be improving (82% indicated that the situation was better than the previous year as shown below).
With regards to Zinc, it was noted that a majority of the caregivers (68%) had never tried to purchase the product for managing diarrhoea. This was an indication that there was low supply of the product, or that caregivers were opting for other products to manage diarrhoea in their children. Only 10% of the caregivers had tried to purchase the product and it was unavailable and more so, in Mirriah (reported by 28% of the caregivers). The unavailability of the product was largely within the last 3 months preceding the data collection process as shown below.

Similar to ORS, caregivers who had tried to purchase Zinc and it was not available had largely tried purchasing it from a public health facility as shown below (82%). This cut across the four intervention districts.
When asked about the number of times the caregivers had tried to purchase Zinc and it was unavailable, it was noted that this had largely happened only once (65%) and that the situation was largely better (reported by 81%) than the previous year.

With regards to the ORS/Zinc co-pack and similar to Zinc, majority of the caregivers (92%) indicated that they had never tried to purchase it for the management of diarrhoea. This was indicative of either a low uptake of the product or an issue with supply in the intervention regions.
For those that had tried to purchase it and it was unavailable (4% of the caregivers), majority (54%) indicated that they had tried to do so within the last 3 months preceding the study. Similar to the other products discussed above, this was largely at public health facilities (reported by 75% of the caregivers).

Similar to ORS and Zinc, caregivers had largely tried to purchase the ORS/Zinc co-pack only once and did not find it (reported by 50% of the caregivers). However, a sizeable proportion of the caregivers (29%) indicated that they had tried to purchase the product twice and could not find it. This was mainly in Mirriah (reported by 38% of the caregivers). In addition to that, the situation was reported to have largely improved than the previous years (reported by 50% of the caregivers).
caregivers) as shown below. A sizeable proportion of the caregivers (29%) indicated that the situation was worse, and more so, in Mirriah (33%) and Matameye (25%) as shown below.

For pneumonia, the challenges reported by caregivers in the acquisition of amoxicillin mainly included the cost of acquiring the product (reported by 38% of the caregivers, more so, in Matameye - 51% of the caregivers, and Mirriah - 30% of the caregivers). Also, long distances to the outlets where these drugs were available was also indicated as a challenge by 33% of the caregivers (more so in Mirriah - 36%- and Matameye - 34% of the caregivers). In addition to that, 30% of the caregivers reported that the Amoxil drugs were not readily available. This was especially the case in Madarounfa and Mayahi districts (100% of the caregivers indicated this).

It is notable that the numbers of caregivers indicating this in the two districts were few- less than 5%. However, it is an indication that there could be an issue of supply in these two districts.
When asked whether they had tried to purchase the medicine and could not find it, majority of the caregivers (85%) indicated that they had not. A sizeable number however (15%) indicated that they had tried to purchase the product and it was unavailable. In addition to that, majority of these caregivers (42% of those that had indicated that they tried to purchase the medicine and it was unavailable) indicated that they tried to do so at a public health facility as shown below.

For those that had indicated that they tried to purchase the medicine and it was unavailable (15% of the caregivers), majority (37%) indicated that they had tried to do so twice. This was especially the case in Madarounfa (57%) and Matameye (47%). In addition to that, a sizeable number of caregivers (28%) indicated that they had tried to do so three times, and more so in
Mayahi (100%), and Mirriah (26%). This notwithstanding, majority of these caregivers (81%) indicated that the situation was better than the previous year as shown below.

Efficiencies Observed with the Supplies Management Activities

It was notable that UNICEF was working with other partners, including MOH in the provision and distribution of the essential drugs for the treatment of diarrhea and pneumonia to meet the existing needs. The supply system was decentralized such that the supply of the essential medicines was done up to the community levels as indicated below. This system was found to be effective in ensuring that the medicines reached the community levels where they were needed the most.

“The supply system is decentralized through OPPC. Zinder Region supplies Agadez and Diffa while Niamey supplies the Regions of Tillabéry, Dosso and Tahoua. In this programme, estimations have been made for diarrhoea according to the needs of each region. The products are supplied up to the community health centres.” Ministry of Health official, Directorate of Public Health

Whist the joint management of purchased and donated drugs was found to be effective in assuring constant supply, it was found to be creating confusion in the actual use of products by the beneficiaries. The packaging was for instance found to be different for some products (since the suppliers were different) and this brought about discrepancies since caregivers expected the same products they were educated on. This posed a risk of disruption in medicine demand and supply in general.
Sustainability of the Supplies Management Activities

In order to ensure that the gains made from the program are sustainable, a number of hitches experienced under this program would need attention as discussed below.

a. **Products packaging barring uptake.**

A mentioned in the previous section, variances were seen in the packaging of the essential products supplied for managing diarrhoea and pneumonia. This in turn led to hesitation in their uptake, especially by the caregivers as shown below. For more sustainable results, it would be recommended that some uniformity is adopted. In case of changes, it is recommended that awareness creation is made on the same to avoid disrupting the demand and supply processes.

> "The main challenge we face is where there is a change in products packaging… you know when people come and you show them the same product in different packaging, they dispute…" **Private Partner, Zinder**

b. **Availability of drugs through private sector channels**

It was notable that the supply of the essential medicines was streamlined to include the private sector. Nevertheless, challenges were reported in the timely provision of products to re-stock. This was especially so for Zinc and Amoxicillin as shown below. It was also notable that the supply of the ORS/Zinc co-pack was missing in this sector, a gap that would need to be addressed for more effective management of diarrhoea cases, especially since Zinc was taking time to re-stock.

> "Yes, we experience stock-outs but these products are replaced almost immediately. Zinc and Amoxicillin take some time to be replaced…, we do not however have the ORS/Zinc Co-pack…ORS is readily available" **Private Partner, Zinder**

c. **Distribution of supplies**

It was notable that the distribution of the essential medicines was not harmonized with the facilities receiving them. In some instances, as reported below, the supplies would be delivered without the relevant personnel being informed. This posed the challenges of the supplies not reaching the required departments and being used for the intended use. The need to harmonize distribution processes with the facilities would therefore be necessary for a more effective approach.
“The partners have done a good job in supporting us… however; distribution of supplies at the health centres is not properly done because most often it is the drivers that come at night. We have a problem with that since we are not always informed. If materials are dropped at our structures, we should be notified…”

_Region in charge of Health, Zinder_

In addition to that, the same challenge reported in the private sector was also seen in the public sector where delays in the supply of Amoxicillin were reported. A more streamlined approach of managing demand and supply of the essential medicines at the facilities is therefore necessary to avoid prolonged periods of stock-outs.

“Well, in terms of ORS and zinc, the supply and quantity is good enough if one may say. But in terms of amoxicillin dispersible, the supply often delays and that is why we sometimes we have interruptions and shortages”

_Frontline Health Workers’ Manager, Mayahi_

d. **Knowledge gaps in medicine use**

It was found that despite training sessions being carried out at the onset of the program implementation, knowledge gaps still existed on the targeted population for the essential medicines for treating diarrhoea and pneumonia (children under 5 years). In Mirriah for instance, some cases were found where the medicines had been administered to adults. This was an indication of the need for scaling up continuous supervision and support for the health providers at the facilities to avoid misuse of drugs.

“We encountered cases where the medication was given to adults… so there was misuse of medicinal products which is not intended directly to that target group… there were therefore cases of stock-outs for children between 0-5 years”.  

_Frontline Health Workers Manager, Mirriah_

### 6.4.5 Public-Private Partnership Activities

The intention of the activities under the Public-Private Partnership Activities was to explore and strengthen public-private partnerships and make better use of private sector channels for appropriate diarrhoea and pneumonia treatment. It was however noted that the private sector in the country was weak and its involvement in the program was therefore limited.

**The Need for Public-Private Partnership Activities in Niger**

The program was implemented in a collaborative approach where stakeholders from different quotas were involved in the implementation of various activities planned. As indicated above however, the private sector in Niger was reported as being weak and opportunities for its involvement in the program were therefore limited. At the time of carrying out this evaluation,
UNICEF was still exploring different options for strategic partnerships with the private sector. Collaborative approaches were therefore pursued mainly done through the government, civil society and development agencies operational in the country.

The PPP component of this program aimed at achieving the following results:

a) Having key supportive policy changes implemented as necessary
b) Having the co-packaged ORS and zinc and amoxicillin DT readily available

Public-Private Partnership Initiatives Implemented in Niger

To achieve the expected results, a number of activities were carried out. First, through close partnership and advocacy, UNICEF was able to push for the inclusion of amoxicillin dispersible and ORS/Zinc in the list of essential medicines in Niger. Secondly, demand generation activities were designed and implemented through joint partnerships between UNICEF and the civil society (local NGOs, community leaders, health districts’ leads and local media) for social and behavior change in order to enhance demand for appropriate healthcare services. Thirdly, the development of strategic partnership with other NGOs- such as PSI- has extended the opportunities to enlarge scope for the gains achieved through the implementation of the Diarrhea and Pneumonia Initiative. There has been continuous monitoring of the community’s involvement in the proposed behavior changes and twice a year, a national review is done in all districts as part of health development planning. This review covers key indicators including access to care and is done after joint partners’ field visits and participatory health system analysis. UNICEF actively participates in such forums and platforms alongside other partners. In addition to that, in 2012, UNICEF in partnership with the MOH launched the decentralized monitoring of implemented initiatives in 12 districts- including the four targeted under the Diarrhea and Pneumonia Initiative- aimed at identifying main bottlenecks of the health system and correction actions recommended for addressing the identified bottlenecks.

Effectiveness of the Public-Private Partnerships Implemented

It is notable that one of the key expected results from PPP was to have supportive changes towards the management of diarrhoea and pneumonia implemented in the country. Through effective advocacy and lobbying, UNICEF was able to have the essential medicines for these illnesses included in the list of essential drugs of the National Office of Pharmaceutical and
Chemical Products (ONPPC). In addition to that, through partnership with UNFPA and the MOH, KFP communication on diarrhoea and pneumonia management was included ‘Husband Schools’ during demand generation activities. The role model husbands were deemed most effective in encouraging and influencing other men in their communities to take up recommended preventive and curative care seeking behaviors.

**Efficiency of the Public Private Partnership Initiatives**

It was notable that the program implementation in Niger was within the framework of a joint action plan for resilience building in 35 vulnerable municipalities of Niger. Among the 11 municipalities targeted in 2014 for the implementation of the UN joint action plan for resilience building, seven were in the four targeted intervention districts where the Diarrhoea and Pneumonia Treatment Initiative was implemented. Moreover, UNICEF Niger was also involved in the implementation of a nutrition project implemented in six communes of Madarounfa, Mayahi and Matameye with the support of the European Union (EU) for acceleration towards the MDGs in Niger. This therefore meant that the targeted communities were able to benefit from joint efforts of different stakeholders. These synergies increased opportunities to improve the performance of the DFATD program.

**Sustainability of the Public Private Partnership Initiatives Implemented**

As indicated, UNICEF was implementing the program in Niger through joint efforts with other stakeholders. It was notable that there had been continuous monitoring of the community’s involvement in the proposed behaviour changes. Consequently, twice a year, a national review was reported as being done in all districts as part of health development planning. This review covers key indicators including access to care and is done after joint partners’ field visits and participatory health system analysis. UNICEF actively participates in such forums and platforms alongside other partners. This presents an opportunity for continuity of the achievements made under the Diarrhea and Pneumonia Treatment Initiative and presents opportunities to further address existing bottlenecks towards the full realization of the intended impact of the program. Further, in 2012, UNICEF in partnership with the MOH launched the decentralized monitoring of implemented initiatives in 12 districts - including the four targeted under the Diarrhea and Pneumonia Initiative. This monitoring was aimed at identifying main bottlenecks of the health system and correction actions recommended for addressing the identified bottlenecks.
This notwithstanding, there is a need to create more synergies in the growth of PPP in Niger for more sustainability. As reported below, tremendous gains have been made through partnerships but these may not be sustainable if mechanisms to further relationships among key stakeholders in the health sector are not enhanced.

“The situation of diarrhoea and pneumonia has tremendously improved because our partners have supported us…but we need to create awareness on the need for PPP for more sustainable results…” Ministry of Health Official, Directorate of Public Health
7 Conclusions

As noted earlier, UNICEF’s Diarrhoea and Pneumonia Treatment Initiative in four countries - Kenya, Tanzania, Niger and Ethiopia was a two-and-a-half-year project that was supported by DFATD-Canada (now Global Affairs Canada) from April 2013 to December 2015. The overall goal was to contribute to reduction in child morbidity and mortality through increased coverage of effective treatment for diarrhoea and pneumonia. We observed that the ultimate purpose of this project was embedded in the renewed commitment to child survival through A Promise Renewed (APR) - to support scale-up efforts in the countries that account for the majority of under-five mortality, by bringing health services closer to underserved populations and addressing the main causes of child mortality; through building capacity of health systems and reaching out to non-traditional partners, including pharmaceutical manufacturers, distribution and logistics management enterprises and media experts, in order to provide more children with effective treatment; in close alignment and coordination with the roll-out of the UNCoLSC/RMNCH TF. As noted earlier, the objectives of the project were to first, increase public awareness and generate demand for appropriate diarrhoea and pneumonia care-seeking among providers and caregivers; secondly, to increase availability of essential medicines used in management of diarrhoea and pneumonia through strengthening procurement and supply chain management; thirdly, to strengthen public-private partnerships and make better use of private sector channels for appropriate diarrhoea and pneumonia treatment; and finally, to expand access to effective integrated treatment services for diarrhoea and pneumonia at community and front-line health facility level.

UNICEF planned to use this project to further accelerate efforts to address two of the major child killers – diarrhoea and pneumonia – through building capacity of health systems and reaching out to non-traditional partners, including pharmaceutical manufacturers, distribution and logistics management enterprises and media experts, in order to provide more children with effective treatment and thus, this external evaluation was relevant to document key achievements and further, to draw lessons for the future. The project was able to make a number of achievements. For instance, it was able to increase in the level of awareness for childhood diarrhoea and pneumonia as well as in increasing the demand generated for appropriate diarrhoea and pneumonia treatments among providers and caregivers. Further, it was able to increase the number of children under five treated for diarrhoea and pneumonia and this could have been
attributed to the improvements made in service delivery and to the improvements in the capacity of frontline workers to provide integrated case management. However, there were challenges with the quality of supervision of these frontline health workers. While structures and procedures had been laid down for their supervision, this did not happen in most countries and this needs to be managed in future programs.

Additionally, there was an increase in public private partnerships for diarrhoea and pneumonia treatment, and these ranged from partnerships for demand creation, partnerships for improving service delivery to partnerships for improving supplies management. These partnerships were broad in their inclusion and brought together government players at both national level and local level, as well as other originations with programs similar to these.

There were co-packaging initiatives that UNICEF laid the ground for and the approaches used differed from country to country. In some, the policy and regulatory framework was laid down to support these, in others, private sector players were engaged to support these bundling efforts, while in others, the central drug stores that are in charge of procurement were engaged to support these co-packaging efforts.

However, challenges were observed in the attempt to improve access to appropriate diarrhoea and pneumonia treatment through public and private sector channels. This was not because demand had not been created but by the fact that there were issues prevalent in the supply of essential medicines used in treating diarrhoea and pneumonia. These issues were caused by a failure of the central agencies to anticipate the demand for products due to poor record keeping and information systems, as well as by poor procurement systems. The issue of poor procurement systems was easier to sort out because it needed to ensure that procedures and guidelines are in place of what should be included in the essential medicines list, and secondly, by setting out guidelines for drug registration and procurement. This was done in most of the countries. However, a problem abounds where it is not possible for governments to anticipate the needs for these essential medicines as the local government agents and health providers on the ground do not share information as quickly as it is required. Thus, by the time that requests are made and procurement issues are sorted, stock outs are experienced. The supplies management component needs to be strengthened in most of these countries to ensure that forecasting is possible, as well as ensuring that the frontline health workers have consistent supply of products.
8 Recommendations

From the implementation of the program, the following lessons can be learnt, which can be used in the implementation of other similar programs in the future, as well as in scaling up this program in these countries as well as in the other countries. The lessons are divided between policy and strategic lessons, as well as program management and implementation lessons.

8.1 Policy and Strategic Lessons

We can learn policy and strategic lessons from all the countries.

a. **The need to sort out policy and regulatory issues before engaging in project implementation**

Ethiopia is a good example of the need to sort out the policy and regulatory environment to form a good foundation for program implementation. The program in Ethiopia faced challenges because proper procedures were not in place and thus, a significant proportion of the work at the inception stages of the program were predominantly about streamlining these procedures, guidelines and standards. This would need to be reviewed for any country prior to any implementation.

b. **The need to build local capacity for production of essential medicines**

Kenya is a good example of the need to build local capacity for the production of essential medicines. It is worth noting that Kenya has a solid local manufacturer base and UNICEF needed to provide technical assistance to two ORS/Zinc Co-pack suppliers (Universal and Cosmos) to enable them achieve global manufacturing standards. It emerged from various reports that Universal Manufacturers had already been approved and Cosmos was expected to follow shortly. Their approval is now expected to increase the availability of the product in the entire East Africa region, thereby creating local capacity. To prevent issues caused by creating a monopoly in production, by supporting these two private entities, it was expected that the competition between the two companies was expected to keep the prices at a reasonable level.

c. **The need to engage private sector players**

In Ethiopia, we can observe the approach taken to involve the private sector players, in addition to the interventions that were targeted with the government. UNICEF and partners engaged DKT
to assist with procurement, bundling, and distribution of ORS and Zinc in private sector channels. The partner selected had 95% coverage in urban areas in the country and thus, this left the partners with an opportunity to focus on the policy formulation as well as in the formulation of guidelines. Ethiopia also trained a significant proportion of private sector players on the new guidelines for the management of diarrhoea and pneumonia.

d. Need to Engage Different Levels of Government in the Implementation Process

Kenya is a country with a devolved system of government since 2013 that needed to bring governance closer to the people, result in efficiencies in service delivery, increase the level of accountability, and address inequities seen in the country in the period preceding this form of governance. Various issues are devolved to the county government but it is worth noting that the national governments and the county governments are distinct from each other in terms of their operations.

The health provision component was devolved to the county governments. In this kind of arrangement, the county governments receive funds from national budget based on agreed allocation criteria and this money is used to implement county development plans. However, it is not guaranteed that once funds are received from the national government that they will be used immediately as these counties has to come up with budgets that are debated by county assemblies before approval. This is a major change from the way the health sector was managed in the past and this has posed challenges in the project implementation process. in as much as this form of government has created immense opportunities, it has resulted in a myriad of challenges such as that of co-ordination of nationally important initiatives, creating a system of accountability for results, clarifying role and reducing duplication in roles between the national government and the county governments as well as in building capacity of personnel in the county governments. Thus, to ensure the success of this program, it was necessary for the UNICEF team to engage both the national and county governments. The national government was necessary for supporting policy reform, amending guidelines for health, as well as in supporting procurement. The county governments were necessary to ensure actual implementation on the ground, as they were responsible for the management and direction of the health workers at different levels.

This also meant that communication material needed to be adapted to the changing government structures to encourage ownership of the program. However, it also offers us lessons of what
might occur if information is not shared adequately between these two forms of government, especially on issues that touch of procurement and supplies management.

**8.2 Program Management and Implementation Lessons**

*a. Distance learning and training of frontline health workers.*

The service delivery component of the program was mainly implemented through the implementation of the dIMCI. This was a 10-week distance-training program, which incorporated 3 days of face-to-face classroom learning sessions and 2 follow-up visits by facilitators/supervisors at their duty stations. It was meant to fit into the training needs for health workers while at the same time ensuring some efficiencies such as continued service delivery as training did not require that they were away from their duty stations for an indefinitely long period. It was targeted at up skilling the frontline health workers.

The dIMCI course implemented in Tanzania was the first in the world to roll out to be rolled out in large scale. One of the key advantages of using this model of training has been a reduction in the cost of training by about 60% of the original cost per person; while the same time achieving the desired results of affecting knowledge.

*b. Compensation of frontline health workers to enable them focus on health promotion activities*

This was observed in Ethiopia where some sort of compensation was provided to the frontline health workers. This ensured that they were able to focus on awareness creation and service provision activities instead of looking for other income streams. These seemed to have better coverage in the different regions as compared to countries that did not have a compensation provision for these workers.

*c. The need for mixed gender of frontline health workers*

This was observed in all countries where frontline health workers are mostly female. While these are trusted and have been able to create awareness and provide services, they were noted as not able to cover rough terrain that is characterised in these regions, nor respond to requests at night for security reasons. They were also affected by normal social changes such as maternity needs as well as marriages that required these females to relocate from their areas of work.
Thus, service delivery was affected. These also did not seem efficient in creating awareness with the male persons in the households. There is need to consider having mixed gender frontline health workers.

d. The need for proper supervision and support of frontline health workers

In most countries, it appears that supervision was not done properly in all of the program areas. While structures and procedures had been set for supervision, these were not always followed, especially on the frequency of supervision. This translated to poor results in the regions where this happened. Future programs need to ensure that they go beyond laying down the structures for supervision to ensuring that this happens. Further, there is need to share information obtained from such supervisions with national governments.

e. The need to conduct an assessment of essential medicines that exist based on previous interventions

It was observed that in most of these countries, that loose ORS products existed at the time the project was beginning. Thus, it was difficult to convince some government to allocate resources to purchase new co-packed products, yet others existed and were at a risk of expiring. There was need to first do a review and assessment of the products that existed in the different facilities to inform the strategy that would be adopted at the beginning of the program implementation.

f. Need to involve the communities during demand generation

Dialogue and social listening were found to be effective channels in driving behaviour change amongst the communities in Niger. Participatory approaches were incorporated where for instance, social dialogue sessions were held. These were informed by “FADA” videos- these are educative health films that involved villagers acting in the films produced, as well as radio programs where educative content on health matters was broadcast in local languages. Additionally, visual images with messaging touching on Key Family Practices (KPFs) were included in the clothing worn by community health workers as they carried out awareness campaigns. These activities sparked dialogue and continuous interest and involved in the communities. Further, an implementation monitoring team was put in each village involving the village chief, the health workers and community volunteers for continuity. This allowed communities to make their own analysis of the issues they faced and identify local bottlenecks that were affecting them, as well as identify feasible solutions for adoption.
Attached herewith are the data collection instruments used in the primary research phase of this project.

9.1 Data Collection Instruments

a. *Household Questionnaire with Caregivers*

Microsoft Word 97
- 2003 Document

b. *Key Informant Interviews' Discussion Guides*

Microsoft Word 97
- 2003 Document