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# Maternal Newborn and Child Health Services Availability and Readiness in a Post Conflict District in Uganda: Lessons Learnt from a Health and Community Systems Strengthening Initiative



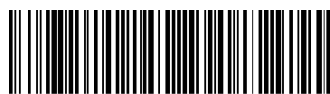
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## ABSTRACT

World Vision Uganda (WVU) in partnership with Amuru district local government implemented a maternal newborn and child health (MNCH) project with a focus on contributing to improved health system capacity to deliver equitable MNCH services from 2013 to 2016. The project supported 2 district-wide service availability and readiness assessment (SARA) studies to help to identify system strengths, to focus investments. The project financially facilitated and coordinated health worker training on Helping Baby Breath Plus (HBB+), Integrated Management of Child Illness (IMCI), timed and targeted counseling (ttC) and nutrition assessment counseling and support (NACS) in the project area. In addition, the project supported the district health team to conduct routine quarterly health worker support supervision, mentoring and coaching. Through Citizen Voice and Action (CVA) and utilizing findings from the service availability and readiness assessments (SARA), the project empowered local citizens to demand equitable MNCH services and mobilized district, partners and MOH to prioritize MNCH investments in the district. This study was done as part of WVU end of project evaluation for Amuru-Lamogi MNCH Project in the two intervention sub counties of Amuru, Lamogi and comparison sub counties of Atiak and Pabbo all located in Amuru district. The survey spearheaded by the district health team (DHT) was carried out in 29 out of the 32 government and nongovernmental health facilities. The survey utilized an abridged service availability and readiness assessment (SARA) method guided by the SARA methodology adapted from the service availability mapping (SAM) tool developed by WHO, and the service provision assessment (SPA) tool developed by ICF International under the USAID-funded MEASURE DHS project. Our findings indicate that overall the service availability and readiness capacity index for the district improved from a baseline of 39.1% in 2013 to 55.7% at the end of project in 2015. Good performance was registered for health infrastructural development (from 28% to 72%), health worker capacity building for MNCH (from 28% to 63.8%) and child care services (from 27% to 78.8%). While the district has made significant improvements in MNCH service availability and readiness capacity, services like laboratory (from 22% to 38.9%), antenatal (from 42% to 47%), postnatal care (from 62% to 59.2%), policies and strategies (from 12% to 20.3%) with a focus on availability and or implementation/utilization, equipment and supplies (from 60.1 to 51.9%) and PMTCT (from 29% to 43.9%) still have gaps and therefore need to be prioritized.

## 1. INTRODUCTION

Uganda implemented the health sector decentralization in the mid-1990s to shift responsibility for health care delivery from the central government to the districts. District level responsibilities now include planning, management and delivery of district health services as defined within the minimum health care package and health management information systems. The service availability and readiness assessment (SARA) is a health facility assessment designed to assess and monitor the service availability and readiness of the health sector and to generate evidence to support the planning and management of a health system. Health systems strengthening helps to engage and / or advocate for initiatives and strategies that improve one or more of the functions of the health system and leading to better health through improvements in access, coverage, quality, or efficiency.

Northern Uganda where Amuru district is located experienced two decades of armed conflict which resulted in breakdown of the health system. Armed conflicts almost always impact the health of affected populations, health systems and social determinants of health in affected areas negatively. Conflict occurs more frequently in low-income countries of the world where their impact is more severe (World Bank, 1998); thus further compounding the poor situation of the social determinants of health and weak health systems which are usually associated with such countries. Impact of conflict on health could be direct or indirect ; direct impact of conflicts on health include physical trauma, destruction and looting of health infrastructure, equipment, medicines and supplies which render health facilities non-functional resulting in disruption of health services, reduced access to and utilization of health services (Vreeman R *et al*, 2009). Amuru being a new district and recovering from war lacks physical infrastructure and the critical personnel and resources to effectively perform as a “functional” district health system.

SARA methodology is adapted from the service availability mapping (SAM) tool developed by WHO, and the service provision assessment (SPA) tool developed by ICF International under the USAID-funded MEASURE DHS project. It entails the application of a systematic survey to assess health facility service delivery. Performance on a set of core indicators on key inputs and outputs of the health system can be used to measure progress in health system strengthening over

time. The three main thematic areas of SARA include service availability, general service readiness, and service-specific readiness.

Uganda has conducted two national SARAs in 2012 and 2013 (MOH, 2014). According to the Uganda 2013 SARA survey, only 32% of health facility had all items for standard precautions for infection prevention (urban HC capacity of 84% compared to 82% for rural facility), only 6% of the health facility had capacity to do all basic diagnostic tests (rural health centres 38% compared to 58% for urban health facilities). In addition, only 32% of the health facilities had all the basic equipment like thermometers and stethoscopes. Furthermore, the findings indicate that none of the health centers had all essential medicine and the mean availability of these essential medicines for H/C11 was 28% compared 53% for H/CIV. All these trace indicators show disparities between urban and rural areas and could point out to health service availability and accessibility disparities.

World Vision Uganda in partnership with Amuru district local government designed and implemented a maternal newborn and child health project with systems strengthening focus from 2013 to 2016. Project implementation was in 2 sub-counties of Amuru and Lamogi. One of the project outcomes was improved and equitable access to maternal newborn and child health (MNCH) services. For the project to achieve this outcome, availability and readiness of health facilities to offer MNCH services was a key prerequisite. Against this background, the project conducted a service availability and readiness assessment (SARA) for the district at baseline and midterm and end line of the project to identify health facility strengths, weakness, opportunities and threats in regard to MNCH services. The findings were used to prioritize district and project investments, especially at health facility level. Based on the identified gaps, the project supported capacity building of health workers on; Helping Babies Breath Plus (HBB+), Integrated Management of Childhood Illnesses (IMCI), timed and targeted Counseling (TTC), MoH Village Health Team (VHT) basic strategy, Nutrition assessment counseling and support (NACS) and health information management system (HMIS). The project further supported monthly integrated outreaches to underserved communities, supported district health team (DHT) and MoH supportive supervision, facilitated health facility dialogues between the service providers and consumers through citizen voice and action (CVA) that empowered communities to demand quality health services. Through this project, medical equipment and other items to support

integrated outreaches to underserved communities including mattresses, screening curtains, weighing scales, megaphones to support community mobilization for outreaches were distributed to 15 health facilities in the operational sub-counties. Three health facilities of Otwee health center III, Olwal health center III and Awee health center II were each equipped with maternity ward equipment and furniture including oxygen concentrators, patient beds, delivery beds, drip stands, mosquito nets, panel screens and Suction apparatus.

In addition, a team of 06 district mentors was established with support from MoH national trainers and supported to conduct quarterly mentoring and coaching of health workers in 15 health facilities in the operational sub-counties. Mentoring also focused on identified SARA gaps.

This paper provides the findings of the abridged service availability and readiness for maternal newborn and child health focusing on service delivery, infrastructure development, policies and guidelines, laboratory, infection control, HMIS and human resource for health. The assessment took place over the period November 2015 to January 2016. The findings provide an opportunity for our increased understanding of the health systems strengthening approach and its impact on service availability and readiness especially in a post-conflict area.

## **2.0 METHODOLOGY**

### **2.1 Study area**

Amuru is a district found in Northern Uganda, located between longitude 30-32 degrees East; latitude 02- 04 degrees North. It is bordered by Southern Sudan in the North, Gulu district in the East, Lamwo district in the North East, Nwoya district in the South, Adjumani district in the North West, and Arua district in the West. The district headquarters, Amuru is at a distance of 377 km from Kampala (the Country's capital city). Amuru District Local Government was created by an act of Parliament in July 2006. The district consists of four sub-counties: Amuru, Lamogi, Pabbo and Atiak. Amuru and Lamogi are more rural than Pabbo and Atiak which are home to a more a peri-urban population. The study was conducted in all four (4) sub-counties of Amuru, Lamogi, Atiak and Pabbo.

## 2.2 Study design

This study was conducted as part of the end of project evaluation for World Vision Uganda Amuru-Lamogi Maternal Newborn and Child Health Project to obtain a snapshot of service availability and readiness in health facilities across the district. The district-wide survey targeted all health facilities in the district but 29 health facilities out of 31 were available for inclusion i.e. 25 government and 4 nongovernmental health facilities in Amuru district.

## 2.3 Data collection and analysis

Data collection process was spearheaded by the district health team, World Vision Uganda field staff and the consultant. Health facility mapping provided a count of the health facilities in the district by level and therefore guided the plan for assessment. The mapping identified the location, level of health facility, ownership and basic information about the existing health facilities. Health facility mapping was done by health assistants who populated a sub-county level tool designed to capture information on individual health facilities.

The data tool developed was designed to capture reliable information on service delivery such as the availability of key human and infrastructure resources, availability of basic equipment, basic amenities, essential medicines, and diagnostic capacities, and on the readiness of health facilities to provide basic health care interventions relating to maternal newborn and child health in Amuru district. Information on service availability was collected by visiting and interviewing health workers in-charge of health facilities and key department in-charges including but not limited to maternity ward, outpatient, inpatient and laboratory departments. To ensure quality of the data, the research assistants recruited were trained and standardized on the tool. The tool was pre-tested and close supervision was done by field officers during data collection. At the end of each day, the team met to ensure completeness and overall accuracy before submission of data for entry. Data from the survey questionnaires was first cleaned, edited for any irregularities and open-ended responses coded then entered into district data sheet. The data was then analyzed using Microsoft Excel 007 to assess means and frequencies.

## 2.4 Ethical consideration

The study sought and obtained ethical approval from Makerere University School of Public Health Higher Degrees, Research and Ethics committee before it was conducted. In addition, Uganda national council for science and technology (UNCST) also approved the study. Permission to conduct the study was also obtained from the Amuru local government administration. Informed consent was sought from the health facility in-charges and other participants by signing on the administered consent form.

## 3.0 RESULTS AND DISCUSSION

### 3.1 Demographics

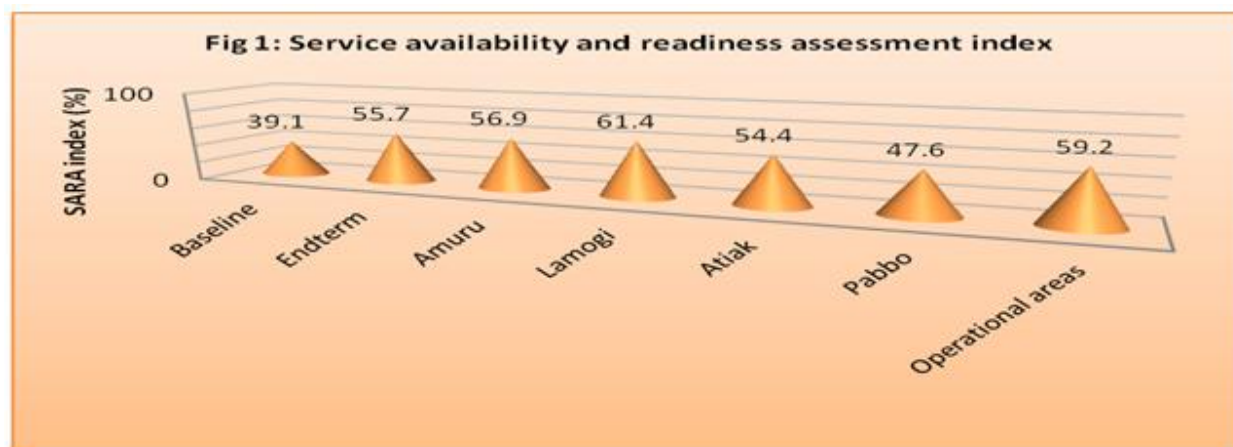
The study was done in 29 out of 32 health centers in the four study sub-counties. The study involved 4 Private not for Profit facilities while majority (25) were government health facilities. It is also important to note that while 23.3% of the parishes in Amuru district had no single health facility, 16.7% had more than one health facility.

**Table 1: Health facility characteristics**

SUB COUNTY	HEALTH FACILITIES BY LEVEL			HEALTH FACILITIES BY OWNERSHIP	
	HCIV	HCIII	HCII	GOV'T	NGO /PNFP
AMURU (Intervention)	0	1	6	6	1
LAMOGI (Intervention)	0	2	5	6	1
ATIAK (Comparison)	1	3	2	5	1
PABBO (Comparison)	0	3	6	8	1
<b>TOTAL</b>	1	9	19	25	4

### 3.2 Overall health service availability index

Overall the service availability and readiness index improved from 39.1% in 2013 to 55.7% in 2015. Lamogi sub-county performed better at 61.4% while the average index in the intervention sub counties was 59.2% compared to 51% in the comparison sub-counties. (See fig 1)



#### 3.2.1 Specific MNCH service availability index

#### 3.2.2 Infrastructure development

Infrastructure development capacity of health facilities improved from 28% at baseline (2013) to 72.2% at end of project evaluation (2015). The end term evaluation put infrastructural development capacity at 61.7% in intervention sub-counties (Lamogi-72%, Amuru-51.3%) compared to 69.4% in comparison sub-counties of Pabbo-76.4%, and Atiak-62.3%. In regard to communication, referral, transport and electricity, study indicates overall service availability and readiness at 58.7% with Amuru performing poorly at only 25% compared to 72%, 62.3% and 76.4% for Lamogi, Atiak and Pabbo respectively". At end-term the district health system performed extremely poor in regard to availability of telephones (20.8%), computer (21.6%), internet for communication (16.25%), vehicle/ambulance (14.5%), motorbikes for transport (11.7%), bicycles for transport (47.6%), electricity (14.4%), generator (8.1%) and solar (58.7%).

### 3.2.3 Policies and strategies for MNCH

MNCH policy and strategy availability at health facility level improved from 12% at baseline (2013) to 20.3% at the end of project evaluation (2015). Atiak sub-county performed best at 31.5% followed by Amuru (27.5%), Lamogi (20%) and lastly Pabbo (2.2%).

### 3.2.4 Prevention of mother to child transmission of HIV (PMTCT)

Overall district health facility PMTCT capacity improved but still below average from 29% (baseline 2013) to 43.9% at end of project evaluation (2015). In intervention sub-counties health facility PMTCT capacity was 50.8% (Lamogi - 61.8%, Amuru -39.8%) while in the comparison sub-counties it was 37% (Atiak - 37.7%, Pabbo - 36.3%).

### 3.2.5 Laboratory

The health facility laboratory capacity improved from 22% at baseline (2013) to 38.9% at end of project evaluation (2015). The study revealed health facility laboratory capacity in intervention sub counties was 40% (Amuru 40.6%, Lamogi-39.3%) compared to 37.8% in comparison sub-counties (Atiak-45%, Pabbo-30.5%). Only 21.2% of the health facilities had refrigerators for laboratory reagents. This subsequently affected service availability and readiness for child immunization which stagnated at 60%.

### 3.2.6 Infection control

Infection control capacity of health facilities overall continued to perform well at 71% at baseline (2013) to 73.1% at the end of project evaluation (2015). The performance of intervention sub-counties was lower 70% ( Amuru-73.8%, Lamogi -66.3% ) compared to non- project area at 76.2% ( Atiak-85.6%, Pabbo-66.7%). Availability of medical masks for health workers performed poorly at 35.1% while auto discharge syringes performed best at 93.7%.

### 3.2.7 Health information management systems (HMIS)

HMIS capacity index for health facilities improved from 49% at baseline (2013) to 63% at end of project evaluation (2015). The intervention sub-counties performed better at 76.2% (Lamogi-76.2%, Amuru-76%) compared to 50% comparison sub-counties (Atiak-55.5%, Pabbo-44%).



While in the intervention area the project worked closely with the DHT to achieve 100% availability of HMIS focal persons, in the comparison areas it was only 33.3%. Utilization of HMIS information was poor at 35.8% in the intervention area while in comparison sub counties it was at 22.2%.

### **3.2.8 Health worker skills development for MNCH**

Health worker skills development in terms of training for maternal newborn and child health increased from 28% at baseline (2013) to 63.8% at the end of project evaluation. Lamogi sub-county performed best at 85.7% followed by Amuru (77%), Atiak (50%) and Pabbo at 42.6% respectively.

### **3.2.9 Equipment and supplies for MNCH**

The evaluation indicates a decline in availability of equipment and supplies from 60.1% at baseline in 2013 to 51.9% at the end of project evaluation. Lamogi sub-county performed best at 58.5% followed by Atiak (51.6%), Amuru (50.4%) and Pabbo at 47%. However, the intervention sub-counties on average performed better at 54.5% compared to 49.3% in comparison area partly because the project supported procurement and distribution of maternity equipment in 3 health facilities of Otwee, Olwal and Awee.

### **3.2.10 Antenatal care services**

Antenatal care capacity of health facilities improved from 42% at baseline (2013) to 68.9% at end of project evaluation (2015). The intervention sub-counties performed better at 50.1% (Amuru-48.1%, Lamogi-52%) compared to comparison sub-counties at 45.7% (Pabbo-47.6, Atiak-43.8%).

### **3.2.11 Post-natal care services**

Postnatal care capacity of health facilities was 62% at baseline (2013) and 59.2% at the end of project evaluation (2015). Analysis revealed that intervention sub-counties performed better at 64.3% (Lamogi-66.9%, Amuru-61.6%) compared 54.1% in comparison sub-counties (Pabbo-54.5%, Atiak at 53.7%). Analysis of key aspects of postnatal care revealed that there is still more work to be done, for example the district health facility service availability and readiness

for permanent family planning methods such as tubal ligation and vasectomy was at 47.9% where the project operational sub-counties performed better at 62.5% for Amuru and 42.9% for Lamogi. For special care for low birth weight infants (Kangaroo Mother Care) the district SARA was only 36.9% the intervention sub-counties performed best and worst i.e. Lamogi at 85.7% and Amuru at 12.5%. The project supported health worker skills enhancement for postnatal care but was limited in reproductive health.

### **3.2.12 Child care services (birth, immunization and management of illness)**

Health facility childbirth care improved from 27% at baseline (2013) to 78.8% at the end of project evaluation with Amuru sub-county performing best at 80.1% followed by Pabbo at 79.8%. Child immunization capacity of the health facilities minimally increased from 60% at baseline 2013 to 60.9% at the end of project evaluation. Atiak sub-county performed best at 64.9% followed by Pabbo (61.6%), Amuru (60.2%) and Lamogi (56.8%). Health facility capacity for management of childhood illness improved greatly from 39% at baseline (2013) to 96.7% at the end of project evaluation. Amuru sub-county performed best at 100% followed by Pabbo (97.9%), Lamogi (97.1%) and Atiak 91.8%. Most of the health centers had medication for illnesses such as pneumonia, diarrhea and malaria at the time of assessment.

**Table 2: Service availability and readiness assessment summary findings**

SARA components assessed	Baseline	End-term	End-term by sub-county				Intervention (Average)	Comparison (Average)
			Amuru	Lamogi	Atiak	Pabbo		
1. Infrastructure development	28	72.2	51.3	72	62.3	76.4	61.65	69.4
2. Policies and strategies for MNCH	12	20.3	27.5	20	31.5	2.2	23.75	16.9
3. Prevention of mother to child transmission of HIV (PMTCT)	29	43.9	39.8	61.8	37.7	36.3	50.8	37
4. Laboratory	22	38.9	40.6	39.3	45	30.5	39.95	37.8
5. Infection control	71	73.1	73.8	66.3	85.6	66.7	70.05	76.2
6. Health information management systems (HMIS)	49	63	76	76.2	55.5	44	76.1	49.8
7. Health worker skills development for MNCH	28	63.8	77	85.7	50	42.6	81.35	46.3
8. Equipments and supplies for MNCH	60.1	51.9	50.4	58.5	51.6	47	54.45	49.3
9. Antenatal care services	42	47.9	48.1	52	47.6	43.8	50.05	45.7
10. Post-natal care services	62	59.2	61.6	66.9	53.7	54.5	64.25	54.1
11. Child care services	27	78.8	80.1	77	78.3	79.8	78.55	79.1
<b>Overall SARA index</b>	<b>39.1</b>	<b>55.7</b>	<b>56.9</b>	<b>61.4</b>	<b>54.4</b>	<b>47.6</b>	<b>59.2</b>	<b>42.3</b>

#### 4.0 DISCUSSION

The MNCH service availability and readiness assessment at baseline were conducted using a systems approach and this helped to promote a common understanding of what the health system of a post-conflict Amuru district was and what specific activities were needed in rebuilding this

fragile system. The findings indicate poor service availability and readiness for infrastructure at baseline. This level of performance stresses health workers, affects communication and reporting, referrals and transport for outreaches.

#### **4.1 Service Availability and Readiness**

By end-term, improvements had been registered overall in the service availability index with the average service availability index in intervention sub-counties higher than comparison sub-counties by 8.2%.

The project used a systems strengthening approach to support the district health system to increase access and coverage of health services, especially to underserved communities by improving availability of equipment and supplies, health workforce skilling, health information management and monthly integrated outreaches to underserved communities. The project investments in skilling health workers on helping babies breathe plus, strengthening health facility and community linkage through community health workers were critical for improving availability of emergency obstetric care services.

The project through the advocacy component called Citizen Voice and Action empowered communities to demand for infrastructural development through community, sub-county and district dialogues. The dialogues brought together community members, political and technical duty bearers and partners to agree on actions for addressing infrastructural gaps. As a result examination and delivery rooms, water sources, latrines, toilets, staff houses, kitchen, signposts, and fencing of health facilities were prioritized and constructed by the district local government with support from partners. However, infrastructural development on average remained lower in intervention sub-counties than comparison sub-counties by end-term. This could partly be explained by the fact that Atiak Sub County which was one of the comparison sub-counties hosts a health center IV (mini-hospital) at health sub-district level which by virtue of the government service standards and a vast catchment population attracts infrastructural development funding more easily than smaller health facilities at sub-county and parish levels.

Communication and transport including telephones, computers, internet, solar power and transportation which were not prioritized by the project registered minimal improvements at end-

term signaling the need for better planning and budgeting for these inputs to the health sector by district and sub-county councils. Evidence indicates that a functional referral system is dependent on availability of communication and transport and combines synergistically with availability of skilled birth attendants to decrease maternal and neonatal mortality.

PMTCT service availability and readiness performed poorly and improved minimally between baseline and end term. There is need to critically focus on programmatic innovations for identifying HIV-infected children and retaining them on ART care and treatment, community mobilization and support for HIV-positive women and their children, and better integration of PMTCT services into stronger systems of maternal, newborn and child health care. The project implemented a strong community-PMTCT component which raised awareness and demand for PMTCT services but contributed little to health facility delivery of PMTCT services including health worker capacity to deliver these services.

Similarly, laboratory services showed minimal improvements with intervention sub counties performing slightly higher than comparison sub counties although this cannot be attributed to the project which did not support laboratory services significantly.

The health information management system improved in the intervention sub-counties but generally remained below average. The district computerized web and phone (mTrack) based system is challenged by the poor mobile and internet network in the district especially in Amuru and Lamogi sub counties which are more rural than the comparison sub-counties. The SARA findings also reveal a general challenge of lack of HMIS focal persons, especially in the comparison sub-counties. **“Lower level facilities are supposed to have a health records officer, the reality, however, is that many of these positions are vacant” District Biostatistician.**

To address the challenge of limited capacity the project supported the district and MoH biostatistics office to conduct capacity building for records officers and focal person in the new HMIS tools. In addition, the district biostatistician and District Health Officer (DHO) were routinely supported to give quarterly supervisory and mentorship support to health facilities in the project area and this partly explains the better performance in the intervention sub-counties. In addition, the project supported availability of HMIS tools including but not limited to

VHT/CHW and TTC household registers, VHT quarterly reporting tools and the mother-child health passports.

The project registered significant improvements in skilling of health facility workers especially to facilitate safe deliveries. National trainers were facilitated to conduct a 5 days standard training for 30 health workers on Helping Babies Breathe plus (HBB+). In the intervention sub-counties, this was reinforced by mentoring and coaching. HBB+ was emphasized because it is an evidence-based curriculum in neonatal resuscitation for use in resource-limited areas to train birth attendants who are responsible for the care of both the woman and the newborn infant at delivery. There is, however, a general shortage of midwives in the district compounded by inequitable and inefficient distribution. Amuru a newly created and yet rural district finds it difficult to attract, and retain critical health workers. In addition, critical RMNCH personnel who provide leadership and manage the health system also double as technical staff at health facilities.

The project through the district health system promoted use of antenatal services like HIV testing, distribution of long lasting insecticide treated nets and IPTp for malaria prevention, iron/folate supplementation etc. through creating awareness about and demand for ANC services by communities. However, the overall service availability and readiness for antenatal care remained below 70% at end term with intervention sub-counties at 50% only. The low antenatal care SARA index affects continued utilization of these services after demand has been generated. Similar challenges were found for postnatal services. The findings from the study indicate a general challenge of supply side bottlenecks for family planning commodities. The main supply side bottleneck is lack of family planning commodities, especially the long-term family planning methods.

Focused investments and support in the areas of equipment, supplies and child health services impacted service availability and readiness in these areas. Intervention areas performed better than the comparison areas at end term in regard to equipment and supplies due to direct project inputs of maternity equipment. Availability and readiness for childbirth and management of childhood illnesses showed the most notable improvements with baseline to end term trends from 27% to 78.8% and 39% to 96.7% respectively. However, immunization stagnated between

60% - 61% over the same period. This raises equity concerns since health center IIs are the frontline service providers for immunization services were found to be poorly resources in terms of inputs for delivery of immunization services including cold chain equipment.

#### **4.2 Recommendations**

Human resources for health shortages emerged as the single most important constraint towards meeting service availability and readiness standards. Despite investments in skilling of health workers as well as in equipment and supplies, the weakness in attraction and retention of health workers particularly to the more rural sub-counties which were the intervention areas made translation of improved service availability into improved coverage and better health outcomes difficult. Community and health system strengthening approaches which aim at increasing service availability and readiness should be designed as comprehensive and integrated packages which address all aspects of the system either directly or indirectly through advocacy to realize optimal benefits.

Communication and transport infrastructure investments may sometimes be outside the health sector's mandate and yet directly impact service availability and readiness. Multi-sectoral collaborations, as well as public – private partnerships, should be part of community and health system strengthening approaches to enable the health sector to engage different actors with the mandate and the resources to influence availability and functionality of infrastructure to support referral systems and ensure continuity of care.

Inequities in how resources are distributed remain a key issue in the health sector and specifically in the study area. Better performance was consistently registered by Atiak sub-county which hosts the HC IV and is relatively more urban than the two intervention sub-counties despite increased advocacy for better service delivery in the intervention sub-counties. In addition, service availability and readiness for immunization services showed minimal improvements and yet these services are mostly provided and accessed at HC II level. District leaders need to be supported to prioritize and equitably allocate resources to more underserved areas.

## **5.0 CONCLUSION AND LESSONS LEARNT**

The abridged service availability and readiness results were found to be particularly useful for district level action planning for maternal newborn and child health. SARA helped to respond to public and donor demand for accountability by demonstrating results at district level. However given that the district is just recovering from conflict, the power of existing interventions does not match the power of the health system to deliver health services to those in greatest need, in a comprehensive way, and on an adequate scale. The health service availability and readiness recovery planning and implementation process in Amuru showed that recovery is a process which should span the humanitarian, transition and development phases of a disaster and should start as early as possible following a disaster. As health and community systems are highly context-specific, there is no single best practice that can be put forward as a model for improved performance. However, the findings demonstrate the importance of having health facilities staffed with sufficient health workers having the right skills and motivation. It also demonstrates the need for SARA before any health systems intervention to guide investments. Finding the right balance between investments in development of health infrastructure and strengthening the health systems functional capacity for governance, supervision, monitoring and service delivery is often a challenge. The need to build the system rapidly may result in ambitious plans without a comprehensive analysis of absorption capacity of the local authorities, communities and available resources. If planned well, integrated comprehensive but phased interventions which address equity concerns and mobilize both private and public actors can support a more sustainable approach to restoring system functionality in a post-conflict setting. Further research is needed to guide sustainability of such achievements but also how to ensure equity and quality of MNCH services.

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