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Maternal and Child Survival Program (MCSP) Uganda Child Health

Baseline Report

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Acronyms and Abbreviations

ACT	artemisinin-based combination therapy
ADHO	Assistant District Health Officer
ARI	acute respiratory illness
CAO	Chief Administrative Officer
CH	child health
CHMIS	Community Health Management Information System
DHIS2	District Health Information System Version 2
DHMT	District Health Management Team
DHO	District Health Officer
DHT	District Health Team
DHS	Demographic and Health Survey
DQA	data quality assessment
DQSA	data quality self-assessment
DT	dispersible tablets
EC	East Central region
ECHP	essential child health package
HC	health center
HF	health facility
HMIS	Health Management Information System
iCCM	Integrated Community Case Management
IIP	Immunization in Practice
IMCI	Integrated Management of Childhood Illness
IMNCI	Integrated Management of Neonatal and Childhood Illness
JSI	John Snow, Inc.
MCH	Maternal and Child Health
MCHIP	USAID's Maternal and Child Health Integrated Program
MCSP	USAID's Maternal and Child Survival Program
MOH	Ministry of Health – Uganda
OPD	outpatient department
ORS	oral rehydration salts
ORT	oral rehydration therapy
PCV	pneumococcal conjugate vaccine
PFP	private-for-profit
PHC	primary health care
PNFP	private-not-for-profit
QI	quality improvement
QIT	quality improvement teams
QWIT	quality work improvement teams
RDT	rapid diagnostic test
REC	Reaching Every Child
REC-QI	Reaching Every Child-Quality Improvement
RED	Reaching Every District
RHITES	Regional Health Integration to Enhance Service
RMNCAH	Reproductive, Maternal, Newborn, Child and Adolescent Health
RI	Routine Immunization
SS	supportive supervision
SW	South West region
U5	under five (5) years of age
UBOS	Uganda Bureau of Statistics
UNEPI	Uganda National Expanded Programme on Immunization
TA	technical assistance
TOT	training of trainers
USAID	United States Agency for International Development
VHT	village health teams
WHO	World Health Organization

Executive Summary

USAID's flagship Maternal and Child Survival Program (MCSP)-Child Health (CH) in Uganda provides above-site technical assistance (TA) to USAID's Regional Health Integration to Enhance Services (RHITES) South West (SW) and East Central (EC) projects to pilot an integrated package of child health interventions, the essential child health package (ECHP), with the ultimate goal of contributing to a reduction in child mortality. MCSP will implement the ECHP in four demonstration districts (Luuka, Kaliro, Ntungamo, and Sheema) in SW and EC regions. The baseline assessment was designed to collect information and guide planning of MCSP CH work plan activities, as well as facilitate measurement of impact in concert with an endline assessment at health facility (HF) level.

The key objectives of the baseline assessment were:

1. Collect information for benchmarking MCSP CH interventions on human resources for ECHP; availability of basic infrastructure and equipment at HFs; availability of essential medicines and commodities; availability of key resources and support at the district level; and completeness, accuracy, and reporting of CH data from HFs.
2. Determine baseline service utilization levels and case management practices for three priority childhood illnesses of malaria, diarrhea, and pneumonia at all levels of HFs in the four demonstration districts to monitor the progress in these practices over the program implementation period through quarterly and endline assessments.

Methods:

A cross-sectional assessment of all functional HFs (public, private-not-for-profit [PNFPs], and private-for-profit [PFPs]) covering 147 HFs, and district health offices in the four districts was conducted between August and September 2017. Data collection methods included review of records and documents at the HFs and key informant interviews at the districts and HF level.

Key Findings:

- While all four districts had a designated senior focal person for maternal and child health (MCH), none had received training in Integrated Management of Neonatal and Childhood Illness (IMNCI). There was a scarcity of training of trainer (ToTs) teams and mentors for IMNCI across the four districts. Only nine health workers had ever been trained as trainers across the four districts, and none of these had received refresher training in the last three years.
- In all four of the demonstration districts, there was a shortage of staff, with staffing levels below 60% and employed staff having little or no training in IMNCI. Only 96 out of 1,164 staff had undergone a Ministry of Health (MOH)-accredited IMNCI training in the past two years.
- Over 80% of the health facilities across the four demonstration districts had outpatient department (OPD) clinic areas for patient registration and triage for case management. Three quarters of the OPD areas were reported to offer visual and audio privacy.
- The most reliable source of clean water in the HFs was rainwater (41%), followed by piped water (37%), and borehole (24%) water. A striking 30% of the HFs did not have any water supply, reaching as high as 41% of HFs in Luuka that reported no water supply.
- About 79% of HFs had a documented procedure for waste management that involved either use of rubbish pits and/or burning.
- The majority of the HFs relied on solar energy for power supply (46%), followed by main grid power (34%). Nearly a third of the HFs reported not having any regular power supply.

- Access to functioning emergency vehicles is universal for hospitals and health center IV (HC IV) facilities, while only 44% and 30% of health center III (HC III) and health center II (HC II)[1], respectively, reported to have access to emergency vehicles at cost or free during patient referrals. About 40% to 50% of HFs reported having access to functional vehicles, except in Luuka district where only 16% of HFs reported such access. Only 26% of the HFs reported having a dedicated, functional line of communication to support patient referrals.
- Access to a hand-washing stall equipped with running water and soap was generally higher around the consultation room (64%) compared to treatment rooms (51%). Almost all HFs (94%) had at least one functional pit latrine or toilet for clients and staff in the facility compound. However, access to soap and water in hand-washing facilities near the latrine or toilet was observed at only 49% of HFs.
- Prolonged stock-outs of key CH-related Health Management Information Systems (HMIS) tools were experienced by all the districts. All districts experienced stock-outs of more than 20 days for key CH-related HMIS tools, including the child register, village health team (VHT) register, HMIS Form 105, referral notes, and VHT reporting forms. In Luuka, Kaliro, and Sheema districts, the stock-out duration for these tools went up to 90 days.
- Quality of data reported in HMIS was found to be inadequate. Most of the data quality issues were due to under reporting, with rates ranging from -3 to -41% of cases in OPD registers across the four districts This data which is used for planning for resource allocation at national level is a misrepresentation of what the district needs.
- There were stock-outs for several of the essential commodities used for management of common childhood illnesses; including artemisinin-based combination therapy (ACTs) as the 1st line treatment for confirmed malaria cases, Amoxicillin dispersible tablets (DT) as the 1st line treatment for pediatric pneumonia, and oral rehydration salts (ORS)/Zinc used for the management of diarrhea among child under five years of age (U5). Data on the stock-outs of essential drugs aggregated by district showed that in Luuka and Kaliro districts of the EC region there was a high percentage of HFs facing stock-outs of these essential medicines at the time of the baseline assessment. The average number of days of stock-outs at HFs was highest for Amoxicillin DT.
    - Approximately 28% and 24% of HFs reported experiencing a stock-out of ORS and Zinc, respectively, in the last three months.
    - Approximately 57% of HFs reported a stock-out of Amoxicillin DT in the last three months.
    - Approximately 27% and 24% of HFs reported a stock-out of rapid diagnostic tests (RDTs) for malaria and ACTs, respectively, in the last three months.
- The presence of functional oral rehydration therapy (ORT) corners at HFs was very low, with only 14% of HFs having functional ORT corners.
- The availability of guidelines, charts, and/or posters on IMNCI was low across all districts. Less than 10% of HFs in EC had any resource documents to guide IMNCI service delivery. In SW, only 21% of HFs had any resource documents to guide IMNCI service delivery. On the other hand, over 60% of HFs across the four districts had immunization-related resource documents.
- Adherence to recommended IMNCI guidelines for managing child cases of pneumonia and diarrhea was low. Across the four districts, only 46% of diagnosed pneumonia cases received

[1] The Government of Uganda health system consists of the district health system (HC I to HC IV) and hospitals. Hospitals provide technical back up for referral and support functions to district health services. The district health system is further divided into health sub-districts (HSDs) at county level with a referral facility - HC IV - serving a population of 150,000. Below this at sub-county level is the HC III, which provides basic preventive, promotive, curative care and first referral cover for the sub-county. At a lower level, are the HC IIs located ideally at parish level, providing only outpatient care and community outreach services, and serving as the first level of interaction between the formal health sector and the communities. At the community (HC I) is an informal network of voluntary community health workers referred to as Village Health Teams (VHTs), which facilitate health promotion, community participation and empowerment in access to and utilization of health services. *(2nd National Health Policy, July 2010)*

an appropriate antibiotic prescription; and only 59% of diagnosed diarrhea cases were treated with ORS and Zinc.

- Only 65 out of 147 (44%) HFs displayed updated catchment area maps, showing data on the population size. The availability of an updated catchment area map indicates that the health facility has updated information on the population it serves (the catchment area) and therefore, has basic information to estimate the service delivery needs of the community it serves.
- In terms of supervision, 115 out of 147 (78%) HFs received supportive supervision (SS) during the last quarter preceding the baseline assessment. The availability of documented findings and action plans at the facility was used to indicate that SS was conducted.
- Approximately half (50%) of HFs in the demonstration districts had a quality improvement team (QIT) that coordinated continuous quality improvement (QI) activities for the HF. The availability of approved minutes for QIT meetings was used to indicate that a HF's QIT was functional. A total of 29 HFs (20%) reported having held a quality work improvement team (QWIT) meeting for CH in the quarter preceding the baseline assessment.
- The overall participation of VHTs in any micro-mapping exercises at the HFs was approximately 41%. In the EC region, only 32% of HFs reported including VHTs in any micro-mapping exercises. In SW region, about 45% of HFs engaged VHTs in a micro-mapping process.
- Overall reporting rates for the Community Health Management Information System (CHMIS) were very low. Across the four districts, only 21% of health facilities had submitted CHMIS reports for period assessed.

Recommendations:

The following recommendations are to address readiness and capacity of the four districts and HFs to deliver the ECHP**.**

1. National Level policy guidelines to support delivery of the ECHP

- There is need to **update the classification for childhood illnesses used in the HMIS and DHIS2**. MCSP will leverage the planned review and update of the national HMIS and DHIS2 to support the MOH to update classifications for childhood illnesses in the HMIS tools and DHIS2.

- There is need to **ensure regular availability from National Medical Stores (NMS) of key HMIS tools**. Further exploration will be needed to determine the factors behind district level stock-outs of the tools and identify appropriate solutions to ensure regular supply from the NMS.

- There is need to **re-orient and re activate the national IMNCI master trainers team**, which has not been fully functional for over five years. The team once re-oriented should be used to build and train teams at sub-national level, who will in turn support refreshing of frontline health workers on updated guidelines for child case management.

- There is also need to **update the national IMNCI job aids**, which were last updated in 2008. MCSP should support the MOH to review and update the IMNCI job aids to be aligned to the latest WHO and MOH guidelines and recommendations for management of childhood illnesses inclusive of nutrition, HIV, TB and early childhood care and development

2. District level leadership, capacity and systems to support delivery of ECHP

- MCSP should work with the RHITES partners to establish IMNCI ToT teams in each of the districts.

- The availability of Health Management Information System (HMIS) tools will be critical for documentation of learning for MCSP. Short-term measures, including direct purchasing, may need to be explored if the lack of HMIS tools persists after MCSP starts.

3. Health facility readiness to support delivery of an integrated package of child health interventions

- Roll out and implementation of the ECHP will require **capacity building of available frontline health workers on IMNCI** to address the limited numbers of health workers trained on IMNCI in the last two years. Equipping the districts with ToT teams should facilitate faster roll out of IMNCI training.

- **Availability of the essential CH commodities and supplies** is very critical for the implementation of the ECHP. MCSP with RHITES will therefore, need to engage very early and continuously with the MOH, National Medical Stores, and USAID's Uganda Health Supply Chain Program (UHSCP) to address the challenges of stock-outs of essential commodities.

- **Job aids for IMNCI** and key family care practices, including counseling cards for caretakers of children, should be availed to health facilities. These act as reminders for key practices, actions and messages needed for case management of children.

- **Improving case management** for pneumonia and diarrhea should be prioritized across the demonstration districts. Additionally, priority should be given to maintain good practices for case management of malaria, while monitoring whether improved capacity for management of other childhood conditions helps to reduce mismanagement of children confirmed negative for malaria.

- The **availability of functional QIT teams** will help institutionalize the implementation of improved case management practices for children. There is a need to support HFs to activate QITs using the national QI Framework, while providing guidance and support on the priority CH areas that can be addressed by the QWITs.

- There is need to **strengthen community and health facility linkages through VHTs and other community structures** across the four districts, to empower communities to take part in the decisions that affect their health; mobilize communities for health programs; and facilitate adoption of healthy practices at household level.

- There is a need to **strengthen health worker capacity to use catchment area data**, including engagement of communities to improve estimation of resources and determination of approaches for implementation of the ECHP. This should go beyond supporting HFs to have maps and plans, but also include support for the utilization of data to increase the coverage of preventive interventions such as immunization. Documentation of SS findings and development of action plans to address the SS findings is an area that will need to strengthened.

- Finally, priority needs to be given to improving **data accuracy and quality**, and further exploration is needed to determine the cause of poor community HMIS reporting rates.

1. Background

The Maternal and Child Survival Program (MCSP) is the U.S. Agency for International Development (USAID) flagship cooperative agreement to introduce and support high-impact health interventions in 32 priority countries with the ultimate goal of preventing child and maternal deaths. MCSP's partnership with USAID/Uganda started with the 2012 initiation of technical assistance (TA) to strengthen routine immunization (RI) through MCSP's predecessor, the Maternal and Child Health Integrated Program (MCHIP). In the final quarter of Fiscal Year 2016, MCSP's scope in Uganda was expanded to include child health (CH). Specifically, MCSP was tasked with providing tailored TA to USAID's Regional Health Integration to Enhance Services (RHITES) projects in the South West (SW) and East Central (EC) regions of Uganda, with the ultimate goal of contributing to a reduction in child mortality in these regions.

USAID's RHITES projects are working with the Government of Uganda to support implementation of the Ugandan Reproductive, Maternal, Newborn, Child, and Adolescent Health (RMNCAH) Sharpened Plan, which includes a package of low cost, high impact, evidence-based RMNCAH interventions that can be applied at different levels of the health system to reduce mortality. The RHITES projects work directly with the districts they serve and at the central level to assist with national scale-up of the package. MCSP is coordinating with the RHITES partners to develop and implement an essential child health package (ECHP) in four demonstration districts (Luuka, Kaliro, Ntungamo and Sheema districts). The project will also generate learning on the feasibility of implementing the package in an integrated manner, including determining the costs involved and using lessons learned to inform national level CH policy and program updates.

Specifically, the MCSP CH program is expected to:

- Enhance national guidelines and frameworks to support implementation of the ECHP.
- Strengthen technical skills, competencies and practices of the RHITES partners and MCSP-supported demonstration districts to implement the ECHP.
- Strengthen district level management and planning practices to support the delivery of the ECHP using adapted REC-QI approaches.
- Conduct a costing analysis for delivery of the ECHP.
- Improve availability of strategic knowledge and tools to scale-up the ECHP.

In Table 1 below are some selected regional level CH indicators from the 2016 Uganda Demographic and Health Survey (DHS). The prevalence of symptoms of common childhood illnesses was high. At least one in three children (33%) had a symptom of fever in the two weeks preceding the DHS, indicating inadequate preventive practices at the household level. Prevalence of symptoms of common childhood illnesses was higher in the EC region compared to the SW region, and even higher than the national average. Case management practices for diarrhea and cough are still inadequate. Of children reported to have diarrhea only about a quarter were treated with oral rehydration salts (ORS) and Zinc, indicating poor case management of diarrhea. Prevalence of acute respiratory illness (ARI) was about 12% and 4% in EC and SW, respectively. Less than a fifth of children with ARI were treated with antibiotics, indicating poor case management of pneumonia. The practice of treating children with fever using artemisinin-based combination therapy (ACT) was high in the demonstration districts (90% in EC and 71% in SW). However, the indicator was below the national average (92%).

Table 1: Prevalence of symptoms of common childhood illnesses and coverage of child health interventions at household level, disaggregated by region.

Indicators for common childhood illnesses and interventions	Busoga Region (Luuka and Kaliro)	Ankole Region (Ntungamo and Sheema)	National Average
Proportion of children who had diarrhea in the 2 weeks preceding the survey	27.3%	16.6%	19.5%
Percentage of children with diarrhea who were given ORS and Zinc	28.5%	17.4%	29.6%
Percentage of children under five with symptoms of ARI in the two weeks preceding the survey	12.3%	4.6%.	9.1%
Percentage of under-five (U5) children who had a fever in the 2 weeks preceding the survey	65.7%	15.7%	33.3%
Percentage of children U5 with fever who took any ACT	90.6%	70.6%	92%
Percentage of children age 12-23 months who received all basic vaccinations	44.9%	61.8%	55.2%

Source: Uganda DHS, 2016.

2. Purpose and Objectives of the Baseline Assessment

While both the RHITES EC and SW projects conducted baseline health facility (HF) assessments, these assessments did not establish baseline levels of HF readiness to deliver the ECHP, nor did they collect data that could serve as a benchmark for monitoring MCSP CH's progress supporting the four demonstration districts. Therefore, this assessment was conducted to determine baseline levels of HF readiness to deliver the ECHP at all levels of HFs in the four demonstration districts, and collect information for benchmarking MCSP CH interventions on key components as described below.

Objective 1: Collect information for benchmarking MCSP CH interventions on the following:

- Existing human resource capacity for delivery of CH interventions
- Availability of basic infrastructure, equipment, and amenities
- Availability of essential medicines and commodities for delivery of the ECHP
- Availability of guidelines and job aids to support quality implementation of the ECHP
- Key resource planning and management practices at district and HF level to support delivery of the ECHP
- Availability of complete and accurate CH data to inform decision-making at HF and district level

Objective 2: Determine baseline service utilization levels and case management practices for three priority childhood illnesses: malaria, diarrhea, and pneumonia at all levels of HFs in the four demonstration districts to monitor progress in these practices over the program implementation period and at endline.

3. Methodology

A cross-sectional assessment of all functional[2] HFs (public, private-not-for-profit [PNFPs], and private-for-profit [PFPs]) and district health offices in the four districts was conducted between August and September 2017. The list of HFs was extracted from the District Health Information System Version 2 (DHIS2). The assessment included systematic collection of data from all four demonstration districts, using a census approach that included all HFs in each district. The data collection tools for this assessment were adapted from the National IMNCI and MCSP RI Reaching Every Child (REC) district assessment tools and are included as Appendix 1. The data collection method included both interviewing key personnel and extraction of data from records and registers, as described below.

A. Key informant interviews at the district and HF level: Data collection focused on district-based responsibilities to improve and support CH service provision in HFs, such as provision of adequate human resources to support CH service delivery and reporting. In each of the four districts, District Health Management Team (DHMT) staff (e.g. District Health Officer (DHO), Biostatistician, or Assistant District Health Officer (ADHO) in charge of MCH) were interviewed to understand the district level resources and preparedness to support implementation of the ECHP. At the HF level, key respondents were HF In-charges.

B. Review of records and documents: At the district level, in addition data was extracted from district Biostatisticians' reports and minutes. At the HFs, key data were extracted from records, reports, registers, and approved minutes. Data extraction was done for the period of April to June 2017.

C. Direct observation: At each of the HFs, direct observation was employed to verify availability and where applicable functionality of commodities and equipment being assessed.

Engagement of districts:

MCSP conducted the assessment in collaboration with both RHITES EC and RHITES SW and the DHOs of the four districts, who helped review and provide input into proposed tools for data collection. The RHITES projects worked with MCSP to mobilize the district and HF teams through official communication letters to the district Chief Administrative Officer (CAO) and the DHO, and through pre-entry meetings conducted in each of the four districts. The district administration was involved in the following:

I. *Selection of health workers as data collectors*. The aim was to empower and strengthen the district capacity to collect and utilize data for performance tracking and decision-making.

II. *Verification of the list of public, PNFP, and PFP HFs that were functional and providing CH services*.

Data collection:

Data for the baseline assessment were collected electronically using programmed tablets on the SURVEY CTO platform[3]. The final paper tool was programmed into the tablets, and the selected district teams were trained for two days prior to the baseline data collection exercise on the application of tablets to collect data.

During the HF assessment, photocopies or carbon copies of HMIS forms (Form 105, 106 and 108) were reviewed in comparison to the CH, outpatient and inpatient registers to obtain caseload and treatment rates.

[2] Health facilities are considered functional if they have a code allocated by the MOH for submission of HMIS reports to DHIS2 of regular basis and provide child health services.
[3] https://www.surveycto.com/product/index.html

District data collector interviewing the Clinical Officer and HF In-charge in Luuka district, August 2017. Photo by: Robert Byabasheija/MCSP

A total of 26 supervisors and 53 data collectors were engaged. The supervisors were primarily selected from those who had supervised data collection for MCSP RI, with at least two years of experience in both data collection and supervision. One supervisor was appointed from the district, and an MCSP technical consultant was added to ensure quality and accuracy of the data collected. The data collectors were primarily health workers with substantial knowledge of health systems and HMIS data compilation mechanisms, and were trained to collect data using tablets from the HFs in the four districts. Table 2 below shows the number of data collectors in each district.

The data collector training lasted two days at each level. MCSP conducted a two-day training (17-18 August 2017) in Kampala for the district data supervisors. Thereafter, district trainings for the EC region were conducted 21-22 August 2017, while the district trainings for the SW region were conducted 28-29 August 2017. Supervisors also participated in the district trainings, supporting MCSP in training data collectors. Data collection occurred from 23-26 August 2017 in the EC region, and 30 August - 7 September 2017 in the SW region.

Table 2: Number of data collectors by district.

District	Male	Female	Total
Sheema	4	10	14
Ntungamo	6	8	14
Luuka	3	12	15
Kaliro	4	6	10
Total	**17**	**36**	**53**

The data collectors were grouped into pairs for data collection under a supervisor, with emphasis on gender balance across the activity. One data collector was responsible for conducting the interviews and counting the records in registers, while the other data collector updated the questionnaire on the tablet. Team members alternated these roles when they moved from one HF to another.

Each data collection team was tasked with collecting data from 2-3 facilities per day. However, during the actual data collection, more time was needed in the HC IV, high volume HC III, and hospitals

because a larger number of registers for the quarter (April to June 2017) had to be reviewed. This unexpectedly increased the length of data collection.

Supervisors reviewed the data collected before uploading. Other data quality control measures included data range checks and logical validation that was programmed into the electronic data collection tablets. The Monitoring, Evaluation, and Learning (ME&L) Advisor reviewed the online-submitted questionnaires for completeness and consistency, and ensured that the expected number of facilities were covered. Feedback to the team was provided to the supervisor every evening, and plans for the subsequent day were shared.

Data analysis:

Since most of the logic and validation checks were in-built in the programming of the tablets, minimal data cleaning was required. The mobile data collection methodology meant that responses were entered directly from the source while in the field, and checks ensured skip patterns were followed. The data was analyzed using STATA Version 12 and Excel 2013. Coding was done in STATA using a previously designed dictionary after exportation from the online database, which ensured the originality of the dataset from the field. The indicators and variables of interests were analyzed by district and by level of care for most of the indicators.

Catchment area and distribution of health facilities:

Table 3 presents the catchment area population for the four demonstration districts in 2016 as extrapolated from the national census conducted in 2014. The children under five years of age (U5) target population is highest in Ntungamo district, at nearly 100,000 children. The children U5 target population in the other three districts ranges between 40,000 to 50,000.

Table 3: Estimated target population (children U5 years of age) in the demonstration districts.

District	Census 2016 Projection	Male	Female	0-59 months target population (20.5%)
Ntungamo	483,841	232,469	251,372	99,187
Sheema	207,343	99,225	108,118	42,505
Kaliro	236,199	115,969	120,230	48,421
Luuka	238,020	124,454	113,566	48,794

Source: Uganda Bureau of Statistics (UBOS) Census Report, 2014.

Table 4 presents the number of HFs assessed in the four demonstration districts. Almost all HFs (147 out of 151) that were identified during the reporting period of April to June 2017 in HMIS forms and registers were assessed. There are 56 HFs in Luuka and Kaliro districts combined for the EC region, and 91 HFs in Ntungamo and Sheema combined for the SW region. Of these HFs, about 68% are located in rural parts of the four districts.

Table 4: Distribution of HFs by district and region.

District	Urban	Rural	Total
EC region			
Luuka	3 (8.3%)	33 (91.6%)	36
Kaliro	4 (20%)	16 (80%)	20
Regional total	**7 (12.5%)**	**49 (87.5%)**	**56**
SW region			
Ntungamo	12 (22.2%)	42 (77.8%)	54
Sheema	20 (54.1%)	17 (45.9%)	37
Regional total	**32 (35.2%)**	**59 (64.8%)**	**91**
Total	**46 (31.3%)**	**101 (68.7%)**	**147**

Table 5 presents the distribution of HFs by level of care in each district. The data shows health services are delivered mainly through the HC IIs and HC IIIs in both EC and SW regions, which means this is a critical focus area for strengthening of CH services.

Table 5: Distribution of HFs by level of care and district.

	EC		SW	
Level of care	**Luuka**	**Kaliro**	**Ntungamo**	**Sheema**
Hospital	0	0	2 (3.7%)	1 (2.7%)
HC IV	1 (2.7%)	1 (5%)	5 (9.3%)	2 (5.4%)
HC III	9 (25%)	5 (25%)	14 (25.9%)	6 (16.2)
HC II	26 (72.2%)	14 (70%)	32 (59.3%)	28 (75.7%)
Others	0	0	1 (1.9%)	0
Total	**36**	**20**	**54**	**37**

Table 6 presents the average population, including the expected number of children U5 within a HF catchment area. On average, each HF serves 9, 19, 24, and 15 villages, respectively, in Luuka, Kaliro, Ntungamo, Sheema. The expected number of children U5 (e.g., the target population) is around 7,400 in Kaliro, nearly 3,600 in Luuka, and just over 4,000 in both SW districts.

Table 6: Average number of villages and catchment area population, per HF, by district.

District	Average number of villages served by a HF	Average catchment population per HF	Expected no. of children under five (20.5%)
Luuka	9.2	17,460	3,579
Kaliro	19	35,909	7,361
Ntungamo	24.5	20,136	4,128
Sheema	15.6	21,188	4,344

4. Results

This section presents the findings of the baseline assessment. The results are organized according to the objectives of the baseline presented in the earlier section. The key purpose of the assessment is to establish benchmark values on selected indicators that are essential for monitoring and tracking progress of the MCSP CH program.

Objective 1: Collect information for benchmarking the MCSP CH program interventions

A. Existing human resource capacity for delivery of CH interventions

One of the key objectives of the baseline assessment is to assess the demonstration districts' preparedness in terms of human resource to provide IMNCI interventions across all HFs. Availability of IMNCI trained clinical staff is critical for efficient implementation of quality CH services. Having a sound idea of available personnel who are trained in IMCNI will be instrumental for MCSP's program planning and designing of its approach to roll out IMNCI training in the districts. Additionally, having a pool of resource people trained on IMNCI at the districts, who in turn train and develop capacity of clinical staffs at the HFs, is crucial for optimal CH service delivery. Table 7 presents the availability of IMNCI resource persons at the district level.

The assessment revealed that there is a scarcity of IMNCI trainers across the districts. It is also evident that there had not been any training of trainers (ToTs) in recent years in any of the districts. Those who had received training to function as IMNCI trainers were minimal and very few were currently available at the district level.

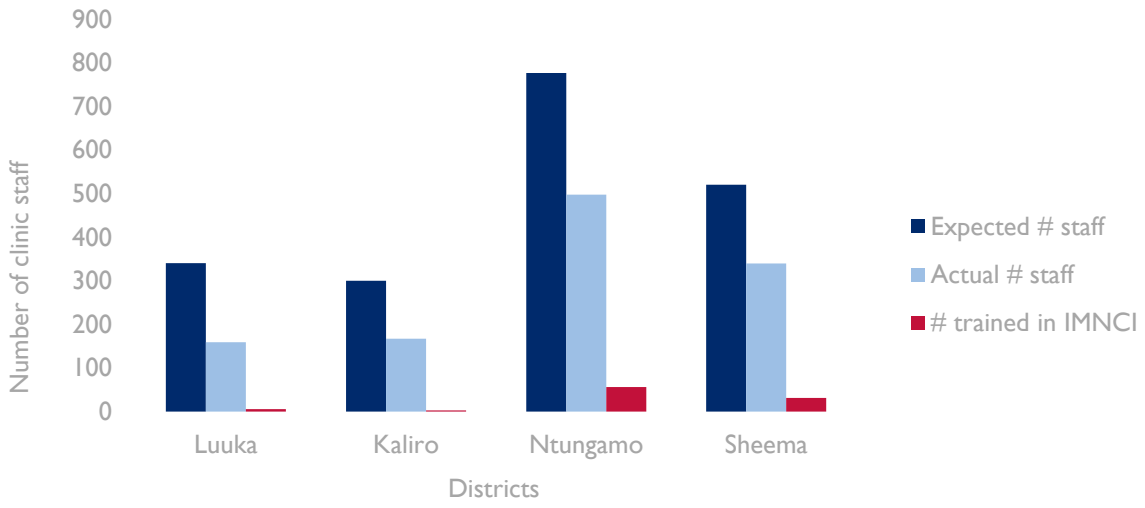
Table 7: Availability of trainers for IMNCI by district.

District	District has IMNCI trainers	# originally trained	# of trainers currently available	Last date of IMNCI ToTs	# attending last training
Luuka	Yes	15	4	5 Sept 2013	4
Kaliro	Yes	7	2	9 Sept 2014	2
Ntungamo	No	0	0	N/A	0
Sheema	Yes	30	3	1 Aug 2010	3

The assessment captured data on the expected number of staff according to the Ministry of Health (MOH) standards, versus the current staffing levels by cadre to ascertain the staffing gap at the HFs. Availability of clinical staff at the HFs at each district is presented in Figure 1 and Tables 8 and 9. Data from the assessment indicated major gaps in the staffing levels in general and specifically, there is a major lack in availability of adequate skilled staff in IMNCI. None of the districts had the required clinical staff recommended as per national guidelines[4].

Considering all four districts, only 96 out of 1,164 (8.3%) available staff had undergone a MOH-accredited IMNCI training in the past two years. Luuka had 3.8%, Kaliro had 1.8%, Ntungamo had 11.2%, and Sheema had 9.1% of the staff stationed in the district's facilities who were trained in IMNCI.

Figure 1. The expected number of staff according to MOH standards versus the number of staff actually available and the number of staff trained in IMNCI.



In the EC region, the number of health workers was 47% of the recommended level in Luuka and 56% in Kaliro (see Figure 1). Along with a less than optimum number of clinical staff, there is also a major shortage of trained IMNCI clinical personnel in the EC region (see Table 8). Only six IMNCI-trained health staff were available in Luuka and three in Kaliro. Of note, the few HFs that did have IMNCI-trained staff were HCII and HCIII level of care facilities, not the hospitals or the HCIV (see Table 8).

In the SW region, the number of available staff was higher, with the proportion of staff positions filled at about 65% of expected numbers in both districts (Figure 1). However, availability of clinical staff trained in IMNCI was low with 56 and 31 clinical staff having received training in IMNCI in last two years in Ntungamo and Sheema, respectively (see Table 9).

[4] http://library.health.go.ug/publications/health-workforce/human-resource-management/approved-staffing-norms-various-levels

Table 8: Staffing levels in EC by district and level of care.

	Luuka				Kaliro			
Level of care	**Total number of HFs**	**Expected # of clinical staff**	**Actual # of clinical staff**	**Number of HWs trained in IMNCI in past 2 years**	**Total # of HFs**	**Expected # of clinical staff**	**Actual # of clinical staff**	**Number of HWs trained in IMNCI in past 2 years**
Hospital	0	0	0	0	0	0	0	0
HC IV	1	31	13	0	1	27	19	0
HC III	9	153	76	4	5	108	70	1
HC II	26	157	70	2	14	165	78	2
Totals	**36**	**341**	**159**	**6**	**20**	**300**	**167**	**3**

In Ntungamo, out of 56 trained staff, 24 were based in HC IV, 24 in HC II, and 6 in HC III. In Sheema, the majority of trained staff were in HC II level (Table 9). It is interesting to note here that there was no IMNCI trainer nor recent training in Ntungamo district, yet 56 IMNCI trained staff were reported in the district. Though this proportion was low considering the total number of HFs in Ntungamo, availability of IMNCI trained staff may have resulted from staff transfer from other regions since no recent training was conducted. The lack of available IMNCI trained staff across the four demonstration districts was not unexpected given the scarcity of IMNCI trainers.

Table 9: Staffing levels in SW by district and level of care.

	Ntungamo				Sheema			
Level of care	**Total number of HFs**	**Expected # of clinical staff**	**Actual # of clinical staff**	**Number of HWs trained in IMNCI in past 2 years**	**Total number of HFs**	**Expected # of clinical staff**	**Actual # of clinical staff**	**Number of HWs trained in IMNCI in past 2 years**
Hospital	2	138	123	1	1	123	65	1
HC IV	5	112	77	24	2	39	30	1
HC III	14	258	121	6	6	74	56	4
HC II	32	262	170	24	28	285	189	25
Others	1	7	7	1	0	0	0	0
Totals	**54**	**777**	**498**	**56**	**37**	**521**	**340**	**31**

Tables 10 and 11 below show HFs with at least two IMNCI trained staff. In Luuka and Kaliro, there were very few HFs that met this criterion. In Ntungamo and Sheema, only 11% and 8%, respectively, have at least two IMNCI trained staff.

Table 10: HFs with at least two health workers trained in IMNCI in last two years by district.

District	Number of HFs with at least 2 HWs trained in IMNCI	%
Luuka (N=36)	1	2.8
Kaliro (N=20)	0	0
Ntungamo (N=54)	6	11.1
Sheema (N=37)	3	8.1
Total (N=147)	**10**	**6.8**

Table 11: HFs with at least two health workers trained in IMNCI in last two years by level of care.

District	Number of HFs with at least 2 HWs trained in IMNCI	%
Hospital (N=3)	0	0
HC IV (N=9)	2	22.2
HC III (N=34)	3	8.8
HC II (N=100)	5	5
Total (N=147)	**10**	**6.8**

B. Availability of basic infrastructure and amenities for delivery of child health interventions.

The baseline assessment explored the availability of basic infrastructure and commodities essential for providing quality CH services by determining the availability of an outpatient department (OPD) clinic area for patient registration and triage; whether there is space in the OPD for patient consultation with visual and audio privacy; and the availability of a regular source of clean water and electricity/power supply. The assessment also collected information on the availability of water, sanitation and hygiene (WASH) facilities in the OPD clinic area, including hand washing facilities with soap and water in consultation rooms and wards; availability of a latrine and waste management facilities; and means for emergency communication and transportation.

Over 80% of the HFs across all four demonstration districts have OPD clinic areas for patient registration and triage, and three quarters of the OPD areas were reported to offer visual and audio privacy as detailed in Tables 12 and 13.

Table 12: Availability of areas for patient registration, triage, and privacy of consultation in OPD clinic areas by district.

District	HF has an OPD clinic area for patient registration and triage	HF has an OPD clinic area for patient consultation that offers visual privacy	HF has an OPD clinic area for patient consultation that offers audio privacy
Luuka (N=36)	30 (83.3%)	25 (69.4%)	23 (63.9%)
Kaliro (N=20)	19 (95%)	18 (90%)	13 (65%)
Ntungamo (N=54)	51 (94.4%)	48 (88.9%)	47 (87%)
Sheema (N=37)	30 (81.1%)	32 (86.5%)	30 (81.1%)
Total (N=147)	**130 (88.4%)**	**123 (83.7%)**	**113 (76.8%)**

Table 13: Availability of areas for patient registration, triage, and privacy of consultation in OPD clinic areas by level of care.

Level of care	HF has an OPD clinic area for patient registration and triage	HF has an OPD clinic area for patient consultation that offers visual privacy	HF has an OPD clinic area for patient consultation that offers audio privacy
Hospital (N=3)	3 (100%)	3 (100%)	3 (100%)
HC IV (N=9)	9 (100%)	9 (100%)	7 (77.8%)
HC III (N=34)	33 (97.1%)	33 (97.1%)	31 (91.2%)
HC II (N=100)	84 (84%)	77 (77%)	71 (71%)
Others (N=1)	1 (100%)	1 (100%)	1 (100%)
Total (N=147)	**130 (88.4%)**	**123 (83.7%)**	**113 (76.9%)**

The most reliable source of clean water in the HFs was rainwater (42%), followed by piped water (37%), and borehole (24%), shown in Table 14. Accessibility to piped water was more common in Ntungamo and Sheema, but in Luuka and Kaliro borehole and rainwater were the most common sources of water. Across the four demonstration districts, a striking 30% of the HFs reported having no water supply, reaching as high as 41% of HFs in Luuka.

Table 14: Distribution of reliable water sources by district.*

Source of Water	Luuka	Kaliro	Ntungamo	Sheema	Total (%)
Piped water	1 (2.8%)	2 (10%)	32 (59.3%)	19 (51.4%)	54 (36.7%)
Borehole	12 (41.7%)	12 (60%)	2 (3.7%)	0	26 (24.1%)
Hand pump/Well	0	0	5 (7.6%)	0	5 (2.9%)
Rainwater	9 (25%)	9 (45%)	23 (42.6%)	20 (54.1%)	61 (41.5%)
No water supply	15 (41.7%)	2 (10%)	3 (5.6%)	6 (16.2%)	26 (29.9%)
Total	**37**	**25**	**65**	**45**	**175**

**Multiple water sources were reported, resulting in the total N being higher than the sample size.*

The majority of HFs relied on solar energy for power supply across the four demonstration districts (46%), followed by main grid (34%), as shown in Table 15. Nearly a third of the HFs reported not having any regular power supply. Access to some form of regular power supply was best in Sheema compared to the other three districts.

Table 15: Distribution of reliable power sources by district.*

Source of Power	Luuka	Kaliro	Ntungamo	Sheema	Total
Main grid	4 (11.1%)	4 (20%)	25 (46.3%)	17(46.0%	50 (34%)
Solar system	18 (50%)	12 (60%)	16 (29.6%)	21 (56.8%)	67 (45.6%)
Generator	1 (2.8%)	0	3 (5.6%)	2 (5.4%)	6 (4.1%)
No power supply	14 (39%)	7 (35%)	20 (37.0%)	6 (16.2%)	47 (32%)
Total	**37**	**23**	**64**	**46**	**170**

**Multiple power sources were reported, resulting in the total N being higher than the sample size.*

Access to reliable, fast[5] communication and functional transportation is very important in providing quality health care, particularly in the case of referral for emergencies. The assessment focused on availability of a dedicated telephone line (whether privately- or publicly-owned) to which the HF had access any time. Only one quarter of the HFs had access to equipment for fast communication.

The modes of transportation included in the assessment were privately-owned vehicles, motorcycles, and ambulances located within proximity of the HF and used for transporting patients during referral at a cost or for free**.** About 40% to 50% of HFs reported having access to functional vehicles, except Luuka where only 16% of HFs reported such access (Table 16). Access to functioning emergency vehicles was universal for hospitals and HC IV, while only 44% and 30% of HC III and HC II, respectively, reported to have access to emergency vehicles (Table 17).

Table 16: Communication and access to emergency vehicles by district.

District	HF has equipment for fast communication	HF has access to a functional vehicle for service
Luuka (N=36)	3 (8.3%)	6 (16.7%)
Kaliro (N=20)	8 (40%)	9 (45%)
Ntungamo (N=54)	17 (31.5%)	28 (51.9%)
Sheema (N=37)	11 (29.7%)	15 (40.5%)
Total (N=147)	**39 (26.5%)**	**58 (39.5%)**

[5] Fast communication means to convey emergency cases to a higher facility with minimum or no connectivity interruptions or power supply challenges. This is critical for improved patient outcomes by enabling HFs to prepare the necessary equipment and medication in time to receive the referred patient.

Table 17: Communication and access to emergency vehicles by level of care.

Level of care	HF has equipment for fast communication	HF has access to a functional vehicle for service
Hospital (N=3)	2 (66.7%)	3 (100%)
HC IV (N=9)	9 (100%)	9 (100%)
HC III (N=34)	16 (47.1%)	15 (44.1%)
HC II (N=100)	11 (100%)	30 (30%)
Total (N=147)	**39 (25.5%)**	**58 (39.5%)**

Additionally, access to WASH in the consultation and outpatient areas was assessed. Access to a hand-washing stall equipped with soap and running water is essential for a HF to prevent and control infections. Table 18 below presents the findings on the availability of hand-washing areas in the HFs, disaggregated by district and level of care. Access to a hand-washing stall equipped with running water and soap was generally higher around the consultation rooms (64%) compared to treatment rooms (51%). About half of the HFs in Kaliro had hand-washing facilities in the consultation room and treatment room, while such access was much lower in Luuka (22%). In SW region, about three fourths of the HFs (74% in Ntungamo and 81% in Sheema) had access to a hand-washing stall in the consultation room. In general, hospitals and HC IV had better hand-washing facilities, compared to HC III and HC II (Table 19).

Table 18: OPD clinic with hand-washing facilities near the consultation and patient rooms by district.

District	Hand-washing facilities with soap and running water in consultation room	Hand-washing facilities with soap and running water in patient room
Luuka (N=36)	14 (38.9%)	8 (22.2%)
Kaliro (N=20)	11 (55%)	10 (50%)
Ntungamo (N=54)	40 (74.1%)	36 (66.7%)
Sheema (N=37)	30 (81.1%)	21 (56.8%)
Total (N=147)	**95 (64.6%)**	**75 (51%)**

Table 19: OPD clinic with hand-washing facilities near the consultation and patient rooms by level of care.

Level of care	Hand-washing facilities with soap and running water in consultation room	Hand-washing facilities with soap and running water in patient room
Hospital (N=3)	3 (100%)	3 (100%)
HC IV (N=9)	7 (77.8%)	7 (77.8%)
HC III (N=34)	23 (67.7%)	20 (58.8%)
HC II (N=100)	61 (61%)	44 (44%)
Others (N=1)	1 (100%)	1 (100%)
Total (N=147)	**95 (64.6%)**	**75 (51%)**

Tables 20 and 21 show the availability of latrines in the HFs that are within accessible reach of a hand-washing facility. The assessment found that almost all HFs (94%) had at least one functional pit latrine or toilet for clients and staff in the facility compound. However, access to soap and water for hand-washing near the latrine or toilet were observed at 49% of these facilities. In EC, only 25% of HFs in Luuka and 35% of HFs in Kaliro had access to soap and water for hand-washing near the latrines. In SW, 65% and 57% of the HFs, respectively in Ntungamo and Sheema, had soap and water available near the latrines (Table 20). The availability of soap and running water near the latrine differed by level of care (Table 21). While all the hospitals had access to soap and water near the latrines, around half of HC IV and HC III had similar access and only 43% of HC II met this criterion.

Table 20: Availability of latrines with soap and water for hand-washing by district.

District	Latrine exists within HF compound	Staff and clients have access to latrine	Hand-washing facilities with soap and running water available near latrine
Luuka (N=36)	34 (94.4%)	34 (94.4%)	9 (25%)
Kaliro (N=20)	18 (90%)	18 (90%)	7 (35%)
Ntungamo (N=54)	50 (92.6%)	52 (96.3%)	35 (64.8%)
Sheema (N=37)	34 (91.9%)	34 (91.9%)	21 (56.8%)
Total (N=147)	**136 (92.5%)**	**138 (93.9%)**	**72 (49%)**

Table 21: Availability of latrines with soap and water for hand-washing by level of care.

Level of care	Latrine exists within HF compound	Staff and clients have access to latrine	Hand-washing facilities with soap and running water available near latrine
Hospital (N=3)	3 (100%)	3 (100%)	3 (100%)
HC IV (N=9)	9 (100%)	9 (100%)	5 (55.6%)
HC III (N=34)	31 (91.2%)	32 (94.1%)	20 (58.8)
HC II (N=100)	92 (92%)	93 (93%)	43 (43%)
Total (N=147)	**136 (92.5%)**	**138 (93.9%)**	**72 (49%)**

The assessment found that the most frequently used method for disposal of waste was open pit and burning (Tables 22 and 23). This is in line with the waste management procedures for HFs to prevent the misuse or re-use of medical supplies, such as sharps and gloves, which could lead to re-infection.

Table 22: Proportion of HFs using appropriate waste management procedures (e.g., open-pit and burning) by district.

District	HFs utilizing open pit and burning
Luuka (N=36)	30 (83.3%)
Kaliro (N=20)	14 (70%)
Ntungamo (N=54)	45 (83.3%)
Sheema (N=37)	27 (73%)
Total (N=147)	**116 (78.9%)**

Table 23: Proportion of HFs using appropriate waste management procedures (e.g., open-pit and burning) by level of care.

Level of care	HFs predominantly dispose waste by open pit and burning
Hospital (N=3)	1 (33.3%)
HC IV (N=9)	3 (33.3%)
HC III (N=34)	25 (73.5%)
HC II (N=100)	86 (86%)
Total (N=147)	**116 (78.9%)**

C. Availability of essential medicines for delivery of ECHP

The availability of tracer drugs, vaccines, and supplies for management of common childhood illnesses was assessed for the quarter from July to September 2017, by establishing the level of stock-outs at HFs in the four demonstration districts. HFs experience of stock-outs was assessed for ACTs essential for treating confirmed malaria cases, Amoxicillin dispersible tablets (DT) used for treating pediatric pneumonia, and ORS/Zinc for management of diarrhea. The number of days of stock-outs of tracer drugs was assessed by averaging the number of days in which there was a stock-out at HFs in a particular district.

The assessment showed that in Luuka and Kaliro of EC, a high percentage of HFs experienced stock-outs of these medicines during the quarter. About 47% of all HFs in Luuka reported stock-outs of ORS/Zinc and Amoxicillin DT, and over half of the HFs in the district reported stock-outs of RDT and ACT (Table 24). Stock-outs in Kaliro were even higher, where 15 out of 20 HFs (75%) reported stock-outs of Amoxicillin DT and 13 out 20 HFs (65%) did not have ACT. While in SW, Ntungamo reported the least stock-outs at 18% of HFs, and 32% of HFs in Sheema reported stock-outs of Amoxicillin DT.

Data disaggregated by level of care across the four districts indicated that HCIIs were more affected by stock-outs, with about 30% to 40% of HCIIs reporting stock-outs of these tracer drugs (Table 25). The proportion of HFs reporting stock-outs was highest for Amoxicillin DT across the districts and level of care.

Table 24: Proportion of HFs reporting stock-outs of tracer drugs in the last 3 months (July to September 2017) by district.

District	ORS	Zinc	Amoxicillin DT	RDT	ACT
Luuka (N=36)	17 (47%)	17 (47%)	17 (47%)	22 (61%)	19 (53%)
Kaliro (N=20)	13 (65%)	11 (55%)	15 (75%)	8 (40%)	13 (65%)
Ntungamo (N=54)	5 (9%)	1 (2%)	10 (18%)	5 (9%)	3 (6%)
Sheema (N=37)	6 (16%)	6(16%)	12 (32%)	5 (13%)	1 (3%)
Total (N=147)	**41 (28%)**	**35 (24%)**	**84 (57%)**	**40 (27%)**	**36 (24.6%)**

Table 25: Proportion of HFs reporting stock-outs of tracer drugs in the last 3 months (July to September 2017) by level of care.

Level of care	ORS	Zinc	Amoxicillin DT	RDT	ACT
Hospital (N=3)	1 (33.3%)	0	1 (33.3%)	0	0
HC IV (N=9)	3 (33.3%)	2 (22.2%)	3 (33.3%)	3 (33.3%)	1 (11.1%)
HC III (N=34)	8 (23.5%)	7 (20.5%)	11 (32.3%)	8 (23.5%)	8 (23.5%)
HC II (N=100)	29 (29%)	26 (26%)	39 (39%)	30 (30%)	27 (27%)
Total (N=147)	**41 (28%)**	**35 (24%)**	**54 (37%)**	**40 (27%)**	**36 (24.6%)**

The number of days of stock-outs of tracer drugs was assessed by averaging the number of days in which there was a stock-out at the HFs in a particular district. The number of days of tracer drug stock-outs varied quite significantly across districts. The average number of days of stock-outs at the HFs was highest for Amoxicillin DT, the first-line medicine for pneumonia among children (Table 26). Both Luuka and Kaliro districts in the EC region experienced prolonged stock-outs, especially of Amoxicillin DT then followed by ACT. Prolonged Amoxicillin DT stock-outs were observed across all levels of care in the four demonstration districts.

Table 26: Average number of days of tracer drug stock-outs by district.

District	ORS	Zinc	RDT	Artemether-lumefantrine	Amoxicillin DT
Luuka (N=36)	28.3	31.5	31.5	34.8	90.4
Kaliro (N=20)	14.6	17.3	11.5	17.6	71.2
Ntungamo (N=54)	20.8	15	47.6	45.8	52.5
Sheema (N=37)	3	3	6	20	37.5
Total (N=147)	**18.9**	**20.1**	**26.4**	**28.1**	**66.3**

Table 27: Average number of days of tracer medicine stock-outs by level of care.

Level of care	ORS	Zinc	RDT	Artemether-lumefantrine	Amoxicillin DT
Hospital (N=3)	0	0	0	0	90
HC IV (N=9)	20	30	52	0	65
HC III (N=34)	7.9	11	18.6	26	75.4
HC II (N=100)	22.5	26	26.7	29.7	63.2
Total (N=46)	**18.9**	**20.1**	**26.4**	**28.1**	**66.3**

The following tables (Tables 28 and 29) show stock-outs of other medicines that are also required for IMNCI, such as mebendazole, which is an anthelminthic drug prescribed for hookworm and whipworm among children. Worm infestation is a major cause of anemia in children. Artemether-amodiaquine is an ACT used for malaria treatment. Injectable gentamicin is a first-line drug for severe bacterial infection cases in U5. Although this drug is not commonly used, it is a lifesaving medicine. Injectable diazepam is used for acute convulsion in children.

In EC region, stock-outs of these medicines were observed for between 55-75% of the HFs in Kaliro, and 19-39% in Luuka district. In SW region, 26-41% of the HFs were stocked out in Ntungamo and 49-65% of HFs in Sheema (Table 28).

Availability of the pneumococcal conjugate vaccine (PCV) was also assessed. The government introduced PCV into the Uganda national immunization program in November 2011. PCV protects against *Streptococcus pneumoniae* bacteria, which causes severe pneumonia, meningitis, and other illnesses and is intended to be offered in all public HFs. Nevertheless, about 20% of HFs reported PCV stock-outs (Table 28).

Table 28: Proportion and number of HFs that experienced stock-outs of other IMNCI drugs by district.

District	Mebend-azole	Artemether Amodiaquine	Injectable ampicillin	Injectable gentamicin	Injectable diazeapam	Pneumococcal Conjugate Vaccine (PCV)
Luuka (N=36)	14 (38.9%)	7 (19.4%)	8 (22.2%)	7 (19.4%)	7 (19.4%)	8 (22.2%)
Kaliro (N=20)	13 (65%)	12 (60%)	11 (55%)	13 (65%)	15 (75%)	3 (15%)
Ntungamo (N=54)	14 (25.9%)	22 (40.7%)	19 (35.2%)	17 (31.5%)	16 (29.6%)	12 (22.2%)
Sheema (N=37)	24 (64.9%)	23 (62.2%)	22 (59.5%)	19 (51.4%)	18 (48.6%)	8 (21.6%)
Total (N=147)	**65 (44.2%)**	**63 (43.5%)**	**60 (40.8%)**	**56(38.1%)**	**56 (38.1%)**	**31 (21.1%)**

Table 29: Proportion and number of HFs that experienced stock-outs of other IMNCI drugs by level of care.

Level of care	Mebend-azole	Artemether-amodiaquine	Injectable ampicillin	Injectable gentamicin	Injectable diazeapam	PCV
Hospital	1 (33.3%)	1 (33.3%)	0	0	0	0
HC IV	3 (33.3%)	5 (55.6%)	4 (44.4%)	3 (33.3%)	1 (11.1%)	2 (22.2%)
HC III	14 (41.2%)	10 (29.4%)	8 (23.5%)	7 (20.6%)	10 (29.4%)	5 (14.7%)
HC II	47 (47%)	48 (48%)	48 (48%)	46 (46%)	45 (46%)	24 (24%)
Total	**65 (44.2%)**	**64 (43.5%)**	**60 (40.8%)**	**56 (38.1%)**	**56 (38.1%)**	**31 (21.1%)**

In order to provide quality CH services, the HFs should have the essential equipment for proper diagnosis of childhood illnesses, such as thermometers, weighing scales, respiratory timers, and clocks. Thermometers, an absolute essential piece of equipment for measuring body temperature (a sign of fever), were not available in more than half of HFs in EC. While weighing scales were more readily available, instruments for measuring length were not. Wall-mounted clock and/or respiratory rate timers are important for counting breathing rate to detect fast breathing and pneumonia. Less than half of the HFs had clocks and the availability of timers was very low (Table 30). Higher level HFs were better equipped compared to HC III and HC II (Table 31).

An ORT corner is an essential component of IMNCI for reducing diarrhea-related morbidity and mortality. It is a designated area or space within a HF (in the OPD or pediatric ward) where children with diarrheal diseases are assessed, classified, treated with ORT, and counseled for continuation of treatment at home. The baseline assessment revealed that only 14% of the 147 HFs had functional ORT corners. In Luuka, none of the HFs had an ORT corner, and only two of 20 HFs in Kaliro had ORT corners. A quarter of the HFs in Ntungamo had an ORT corner, while only six of the 25 HFs in Sheema were equipped with functional ORT corners (Table 30). Hospitals were more likely to have an ORT corner (Table 31).

Table 30: Availability of essential equipment and ORT corners by district.

District	Thermometer	Child weighing scale	Child BP machine	Pediatric stethoscope	Length/ Height meter	Clock	Respiratory rate timers	ORT Corners
Luuka (N=36)	16 (44.4%)	35 (97.2%)	0	1 (2.8%)	16 (44.4%)	17 (47.2%)	1 (2.8%)	0 (0%)
Kaliro (N=20)	6 (30%)	16 (80%)	0	1 (5%)	7 (35%)	7 (35%)	2 (10%)	2 (10%)
Ntungamo (N=54)	32 (59.3%)	46 (85.2%)	5 (9.3%)	10 (18.5%)	20 (37%)	29 (53.7%)	6 (11.1%)	13 (24.1%)
Sheema (N=37)	25 (67.6%)	28 (75.7%)	4 (10.8%)	7 (18.9%)	8 (21.6%)	16 (43.2%)	9 (24.3%)	6 (16.2%)
Total (N=147)	**79 (53.7%)**	**125 (85%)**	**6.1 (9%)**	**19 (12.9%)**	**51 (34.7%)**	**69 (46.9%)**	**18 (12.2%)**	**21 (14.3%)**

Table 31: Availability of essential equipment and ORT corners by level of care.

Level of care	Thermometer	Child weighing scale	Child BP machine	Pediatric stethoscope	Length / Height meter	Clock	Respiratory rate timers	ORT Corners
Hospital	3 (100%)	3 (100%)	2 (66.7%)	1 (33.3%)	3 (100%)	2 (66.7%)	1 (33.3%)	2 (66.7%)
HC IV	8 (88.95)	9 (100%)	2 (22.2%)	2 (22.2%)	7 (77.8%)	6 (66.7%)	2 (22.2%)	1 (11.1%)
HC III	21 (61.8%)	32 (94.1%)	1 (2.9%)	5 (14.7%)	23 (67.6%)	22 (64.7%)	3 (8.8%)	10 (29.4%)
HC II	46 (46%)	81 (81%)	4 (4%)	11 (11%)	18 (18%)	39 (39%)	12 (12%)	8 (8%)
Total	**79 (53.7%)**	**125 (85%)**	**9 (6.1%)**	**12.9 (19%)**	**51 (34.7%)**	**69 (46.9%)**	**18 (12.2%)**	**21 (14.3%)**

D. Availability of guidelines and job aids to support quality implementation of ECHP

IMNCI guidelines, charts, and posters are critical guides for the health service providers to manage childhood illnesses at HFs. The assessment examined the availability of these key IMNCI documents as well as immunization reference materials and tools. The availability of guidelines, charts, and/or posters on IMNCI was low across all the districts. Less than 10% of the HFs in EC had any resource documents to guide IMNCI services. In SW, about 15% of the HFs in Ntungamo and about 25% of the HFs in Sheema had any resource documents to guide IMNCI services. On the other hand, over 70% of HFs in three districts (Luuka, Kaliro and Ntungamo) and about 60% in Sheema were found to have immunization-related resource documents.

Table 32: Availability of IMNCI and immunization guidelines, charts and posters by district.

District	Luuka (N=36)	Kaliro (N=20)	Ntungamo (N=54)	Sheema (N=37)
IMNCI chart booklet	3 (8.3%)	2 (10%)	7 (13.0%)	10 (27.0%)
IMNCI posters	3 (8.3%)	2 (10%)	8 (14.8%)	8 (21.6%)
IMNCI counseling charts	2 (5.6%)	0	9 (16.7%)	5 (13.5%)
Immunization in Practice (IIP) Manual	18 (50%)	14 (70%)	38 (70.4%)	24 (64.9%)
UNEPI Immunization Schedule	29 (80%)	15 (75%)	42 (77.8%)	24 (64.9%)
UNEPI vaccines poster/chart	25 (69.5%)	15 (75%)	43 (79.6%)	21 (56.8%)

Table 33: Availability of IMNCI and immunization guidelines, charts and posters by level of care.

Level of care	Hospital (N=3)	HC IV (N=9)	HC III (N=34)	HC II (N=100)
IMNCI chart booklet	0	3 (33.3%)	7 (20.6%)	12 (12%)
IMNCI posters	1 (33%)	2 (22.2%)	6 (17.6%)	12 (12%)
IMNCI counseling charts	1 (33%)	3(33.3%)	4 (11.8%)	8 (8%)
IIP Manual	3 (100%)	8 (88.8%)	25 (73.5%)	58 (58%)
UNEPI Immunization Schedule	3 (100%)	9(100%)	30 (88.2%)	68 (68%)
UNEPI vaccines poster/chart	3 (100%)	9(100%)	28 (82.4%)	64 (64%)

E. Planning and management practices at district and HF level to support delivery of ECHP

The assessment also determined the existence of key planning and management practices that are needed to ensure a strong and functional system for the delivery of CH services at the district and HF level. The key practices assessed included mapping; presence of a HF micro-plan; presence of a functional VHT system; presence and functionality of QI structures that address CH services; monitoring and participatory review of coverage of CH indicators; and regular SS.

The mapping of HF catchment areas or review of existing catchment areas at district and HF level is a requirement expected of all HFs and districts between October and December every year (start of government annual planning cycle). The catchment area mapping exercise is necessary to determine the number of persons that need to be reached with services and in turn, the resources (human, essential medicines and supplies, and financial) and budget needed by a HF to deliver these services. The mapping is done by identifying and allocating parishes to HFs (district level macro-mapping) and every village to a service delivery point (HF level micro-mapping), which is responsible for delivery of services to that area. Effective mapping requires engagement and consultation with the leaders and community through established community structures, such as VHTs, to determine the community preferences in terms of service utilization and also, to identify and address the barriers to access and effective utilization of services. The presence of a functional VHT structure, as recommended by MOH, is a key step towards getting communities engaged in the delivery of health services. Continuous monitoring and review of service utilization and coverage of services through engagement of various stakeholders acts as a check and balance mechanism to ensure services are meeting the needs of the community, and promotes accountability of leaders at various levels in the district and HF. When continuous monitoring and review of service utilization and coverage of services is coupled with structures and mechanisms for improving quality of care, it ensures that systems are continuously improved to be more responsive to the needs of the community. For all these processes to be effective in improving the delivery of health services, the data used must be accurate. Districts and HFs need to regularly conduct data quality self-assessments (DQSA) to check and address gaps in the accuracy of data. Lastly, SS is needed to ensure improved service delivery.

Table 34 below shows the presence of functioning bodies, tools, and resources that are important for a functional health system at the district level. All districts, except for Kaliro, reported a functional

VHT[6] (see further details about the importance of VHTs in the community engagement section below). The number of active VHTs was 494 in Luuka of EC region; and 1,600 and 1,000 respectively, in Ntungamo and Sheema district of SW region.

According to records of meetings reviewed, Luuka and Sheema had functional QI committees[7], while Kaliro and Ntungamo's QI committees were not functional. All the districts had current macro-maps available at the district level, as well as catchment area populations. All district health offices had monitoring charts with CH indicators, and all districts had conducted a quarterly review meeting in the last quarter of the survey.

Table 34: Availability of district-level functioning bodies, tools and resources critical for a functional health system.

District	Functional VHT system	# of active VHTs	Presence of district QI committee	Functional district QI committee	Availability of macro-plan	Availability of catchment area population	Monitoring chart with CH indicators	SS included in CH interventions	QRM done in last quarter	# of HFs with DQSA last quarter
Luuka	Yes	494	Yes	Very functional	Yes	Yes	Yes	Yes	Yes	37
Kaliro	No	0	Yes	Poorly functional	Yes	Yes	Yes	Yes	Yes	7
Ntungamo	Yes	1,600	Yes	Poorly functional	Yes	Yes	Yes	Yes	Yes	41
Sheema	Yes	1,000	Yes	Very functional	Yes	Yes	Yes	Yes	Yes	20

The assessment also examined the allocation of primary health care (PHC) funds by the districts to CH interventions. Only two districts (Luuka and Sheema) of the four were found to have allocated their district PHC funds for CH interventions. Additionally, of the two districts that had allocated funds for CH interventions, only one district (Luuka) had disbursed all funds allocated for the previous two quarters (January to March 2017, and April to June 2017) to HFs for implementation CH interventions. The other district (Sheema) had only managed to disburse 50% of the funds allocated to HFs.

Tables 35 and 36 present findings related to the availability of micro-maps and the completion of SS visits to HFs in the demonstration districts. Only 65 out of 147 (44%) of HFs had updated and displayed their catchment area maps with population figures. 19 out of the 56 HFs in the EC region had micro-maps produced and displayed. Although the findings were slightly better in the SW region, only about half of all HFs there had micro-maps produced and displayed. These micro-maps are key in estimating the HF needs in terms of medicine, equipment, human resources, financial resources, etc., and help in planning for schedulable CH services such as immunization.

Table 37 demonstrates the data by level of care showing that 20 out of 34 HC IIIs and 39 out of 100 HC IIs had micro-maps updated and displayed. The findings were not much better at higher level HFs, such as hospitals and HC IVs.

In terms of SS, about 78% (115) of the HFs received SS during the last quarter preceding the assessment. In EC, 16 (80%) of all HFs in Kaliro received SS, while in Luuka, only 22 (61%) reported being visited in the last quarter. Over 80% of HFs in the SW region reported having received SS. Documentation of findings during SS is a critical component of tracking the performance of a HF, and HFs were therefore, asked to produce these records as evidence of SS conducted.

The data showed that Luuka district had the poorest SS documentation practices with 69% of HFs in Luuka having documentation of SS available compared to 80% in the other three districts.

In terms of evidence of action to address SS findings, Luuka and Kaliro had over 70% of HFs without action plans, while 40% of HFs in Ntungamo and Sheema did not have action plans. The majority of

[6] A functional VHT is one who three months prior to the assessment was active as evidenced by participation in VHT quarterly meetings held at the health facility and submission of community reports for the quarter preceding the survey.

[7] A functional QI committee is one that regularly holds meetings and follows up on quality improvement initiatives in the district with documentation of at least one meeting to review progress of action plans at least once in the quarter preceding the survey.

HFs that did not have action plans were HC IIs (39%), implying that more capacity building in the area of data management and documentation was critically needed.

Table 35: Availability of micro-maps at HFs by district.

District	HFs with current catchment area map of villages displayed
Luuka (N=36)	10 (27.8%)
Kaliro (N=20)	9 (45%)
Ntungamo (N=54)	28 (51.9%)
Sheema (N=37)	18 (48.6%)
Total (N=147)	**65 (44.2%)**

Table 36: Availability of SS records and action plans at HFs by district.

	HFs received SS in last quarter	HFs kept record of SS	HFs had action plans
Luuka (N=36)	22 (61.1%)	25 (69.4%)	10 (27.8%)
Kaliro (N=20)	16 (80%)	16 (80%)	6 (30%)
Ntungamo (N=54)	44 (81.5%)	44 (81.5%)	32 (59.3%)
Sheema (N=37)	33 (89.2%)	30 (81.1%)	20 (54.1%)
Total (N=147)	**115 (78.2%)**	**115 (78.2%)**	**68 (46.3%)**

Table 37: Availability of micro-maps at HFs by level of care.

Level of care	HFs with current catchment area map of villages displayed
Hospital (N=3)	1 (33.3%)
HC IV (N=9)	5 (55.6%)
HC III (N=34)	20 (58.8%)
HC II (N=100)	39 (39%)
Total (N=147)	**65 (44.2%)**

Table 38: Availability of SS records and action plans at HFs by level of care.

Level of care	HFs received SS in last quarter	HFs kept record of SS	HFs had action plans
Hospital (N=3)	2 (66.7%)	2 (66.7%)	2 (66.7%)
HC IV (N=9)	8 (88.9%)	8 (88.9%)	6 (66.7%)
HC III (N=34)	28 (82.4%)	29 (85.3%)	21 (61.8%)
HC II (N=100)	77 (77%)	76 (76%)	39 (39%)
Total (N=147)	**115 (78.2%)**	**115 (78.2%)**	**68 (46.3%)**

Data showed that half of the HFs in the demonstration districts had at least a QIT that steered QI initiatives at the HF. The majority of HC IIIs and HC IVs had functional QITs (Tables 39 and 40), which could be a result of them having a supervisory role over the lower level HFs.

Table 39: Availability of functional QITs at HFs by district.

District	HFs with functional QIT
Luuka (N=36)	15 (41.7%)
Kaliro (N=20)	11 (55%)
Ntungamo (N=54)	33 (61.1%)
Sheema (N=37)	15 (40.5%)
Total (N=147)	**74(50.3%)**

Table 40: Availability of functional QITs at HFs by level of care.

Level of care	HFs with functional QIT
Hospital (N=3)	3 (100%)
HCIV (N=9)	8 (88.9%)
HCIII (N=34)	24 (70.6%)
HCII (N=100)	39 (39%)
Total (N=147)	**74 (50.3%)**

QIT meetings were meant to be held on a quarterly basis at HF level. The assessment used the availability of approved minutes of QIT meetings as a source of evidence that these teams were functional. A total of 29 HFs (about 20%) reported having held a QIT meeting in the quarter preceding the assessment. Meeting minutes were reviewed by the data collectors to verify the occurrence of the meeting and if CH issues were discussed during the meeting. In EC, less than 10% of HFs in Luuka and 15% of HFs in Kaliro held QWIT meetings in which CH was discussed in the last quarter, with representation of non-traditional stakeholders[8] in the meetings being less than 5%. In SW, 33% of HFs in Ntungamo and almost 14% of HFs in Sheema conducted QWIT meetings in which CH was discussed, with representation of non-traditional stakeholders in those meetings around 13% (Table 41).

Table 41: HFs with QWIT meetings that discussed CH and had non-traditional stakeholders in attendance by district.

District	HFs with QWIT meeting that discussed CH during last quarter	HFs with QWIT meetings that had non-traditional stakeholders in attendance
Luuka (N=36)	3 (8.3%)	1 (2.7%)
Kaliro (N=20)	3 (15%)	1 (5%)
Ntungamo (N=54)	18 (33.3)	7 (12.9%)
Sheema (N=37)	5 (13.5%)	5 (13.5%)
Total (N=147)	**29 (19.7%)**	**14 (9.5%)**

Table 42: HFs with QWIT meetings that discussed CH and had non-traditional stakeholders in attendance by level of care.

Level of care	HFs with QWIT meeting that discussed CH during last quarter	HFs with QWIT meetings that had non-traditional stakeholders in attendance
Hospital (N=3)	1 (33.3%)	1 (33.3%)
HC IV (N=9)	6 (66.7%)	9 (33.3%)
HC III (N=34)	5 (14.7%)	1 (2.9%)
HC II (N=100)	17 (17%)	9 (9%)
Total (N=147)	**29 (19.7%)**	**14 (9.5%)**

Most of the hospitals (100%), HC IVs (89%) and HC IIIs (71%) had QITs. The data showed that hospitals and HC IVs were more likely to hold QWIT meetings and include non-traditional stakeholders in the team. The majority of the non-health stakeholders that participated in the QWIT meetings were political leaders, followed by religious leaders.

F. Community Linkages, engagement and participation in child health service delivery

The assessment found that communities are actively engaging in the planning and management practices through VHTs. VHTs were established by the MOH to empower communities to take part

[8] Non-traditional health stakeholders are members of the community who are not highly technical in the health component of the community but have political or social influence over health-related issues. If they are equipped with accurate information about child health, they play a vital role in moving forward advocacy efforts by health experts. These stakeholders may be political leaders (e.g., Local Councils, Councilors), civil leaders (e.g., Senior Assistant Secretaries), and religious leaders.

in the decisions that affect their health; mobilize communities for health programs; and strengthen the delivery of health services at household level. The National Child and Newborn Survival Strategy, Road Map for Maternal and Neonatal Health, and Malaria Control Strategic Plan, have prioritized the continued engagement and use of VHTs to facilitate and strengthen linkages between HFs and the communities they serve.

The assessment showed that overall participation of VHTs in any micro-mapping exercise was around 41% of HFs (Table 42). In Luuka, only 19% of HFs reported including VHTs in any micro-mapping exercise; while in Kaliro, 55% of HFs reported including VHTs. In SW, about 44% and 48% of the HFs, respectively in Ntungamo and Sheema, engaged VHTs in the micro-mapping process.

During quarterly review meetings, VHTs regularly share experiences, present their reports and obtain feedback. They also use these meetings as a mechanism for obtaining feedback from communities about service provision at HFs. The practice of HFs conducting quarterly review meetings with VHTs was found at 6% of HFs in Luuka district and 40% in Kaliro. In SW, 41% and 54% of HFs in Ntungamo and Sheema, respectively, reported having conducted VHT meetings in the last quarter. Reported meetings were verified by reviewing meeting minutes.

Over 30% of HFs in Kaliro, Ntungamo, and Sheema were reported to aggregate VHT reports and submit them to the district level. However, less than 3% of HFs (only 1 out of 36) in Luuka reported that they submitted VHT reports to the district (Table 43).

While the VHT participation in micro-mapping across all levels of care was similar, the practices of conducting quarterly review meetings with VHTs and submitting VHT reports to districts was lower among the HC III and HC II facilities (Table 44).

Table 43: VHT participation in planning and management practices at HF by district.

District	HF catchment area micro-map available and displayed	VHTs participated in development of micro-map	HF held VHT quarterly meeting in last quarter	HF aggregated and submitted VHT quarterly report to district
Luuka (N=36)	10 (27.8%)	7 (19.4%)	2 (5.6%)	1 (2.8%)
Kaliro (N=20)	9 (45%)	11 (55%)	8 (40%)	7 (35%)
Ntungamo (N=54)	28 (51.9%)	24 (44.4%)	22 (40.7%)	17 (31.5%)
Sheema (N=37)	18 (48.6%)	18 (48.6%)	20 (54.1%)	14 (37.8%)
Total (N=147)	**65 (44.2%)**	**60 (40.8%)**	**52 (35.4%)**	**39 (26.5%)**

Table 44: VHT participation in planning and management practices at HF by level of care.

Level of care	HF catchment area micro-map available and displayed	VHTs participated in development of current micro-map	HF held VHT quarterly meeting in the last quarter	HF aggregate and submit VHT quarterly report to the district
Hospital (N=3)	1 (33.3%)	2 (66.7%)	2 (66.7%)	2 (66.7%)
HC IV (N=9)	5 (55.6%)	5 (55.6%)	6 (66.7%)	3 (33.3%)
HC III (N=34)	19 (55.6%)	14 (41.2%)	12 (35.3%)	9 (26.5%)
HC II (N=100)	40 (40%)	39 (39%)	32 (32%)	25 (25%)
Total (N=147)	**65 (44.2%)**	**60 (40.8%)**	**52 (35.4%)**	**39 (26.5%)**

G. Availability of complete and accurate child health data to inform decision making at HF and district level

Availability of different types of HMIS forms was assessed at the district level stores. District level stores are the sources of these forms for HFs, and therefore, stock-outs of forms at the district level will affect HFs. There were no stock-outs of HMIS 096 (Quarterly Household Summary Form) and HMIS 031 (Outpatient Register Form). However, prolonged stock-outs of other forms, such as referral forms and registers, were noted in all districts, especially in Luuka and Kaliro (Table 45).

Table 45: Number of days of stock-outs of various CH-related HMIS tools at the district stores.

HMIS FORMS	Luuka	Kaliro	Sheema	Ntungamo
HMIS FORM 096: Quarterly Household Summary	0	0	0	0
HMIS FORM 097: VHT/iCCM Quarterly Report	0	0	30	0
HMIS FORM 032: Referral Note	90	90	60	60
HMIS FORM 105: Health Unit Outpatient Monthly Report	20	20	20	30
HMIS FORM 073: Child Register	90	90	30	20
HMIS FORM 031: VHT Register	90	90	90	10
HMIS FORM 031: Outpatient Register	0	0	0	0

There is increasing demand for real-time, data-driven decisions at all levels. Timeliness and completeness is one of the five USAID data quality standards. In Uganda, the MOH requires:

- HF monthly reports submitted to the DHO by the 7th day of the subsequent month.
- Monthly reports entered into the DHIS2 database at the district level by the 15th day of the subsequent month.

This constitutes timeliness in the Ugandan context. Therefore, this assessment also reviewed the timeliness and completeness of reports for the demonstration districts from DHIS2. Timeliness is defined by the ability of the system to capture patient information, including in-take data, program entry dates, and services provided, in the HMIS within a recommended period of time. Completeness is defined by all of the patients receiving services being entered into the HMIS. Comparing HMIS data from the four demonstration districts with the previous quarter, shows that timely submission of CH-related HMIS forms declined slightly (Figure 2).

Figure 2: Timeliness of HMIS reporting (HMIS Form 105) by district.

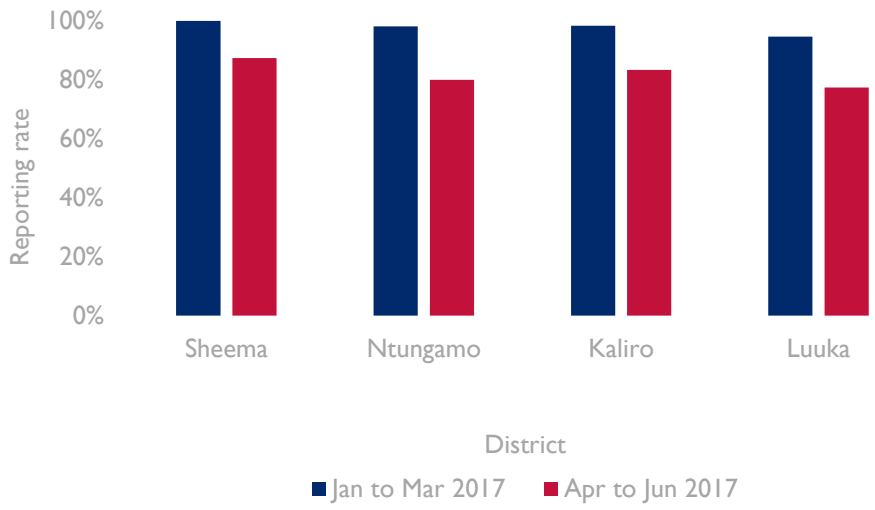


Figure 3: Timeliness of HMIS reporting (HMIS Form 105) by level of care.

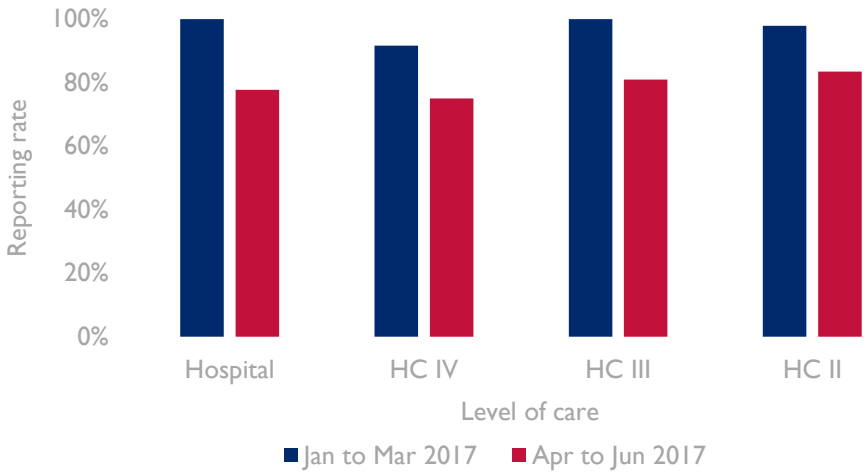


Figure 4: Completeness of HMIS reporting (HMIS Form 105) by district.

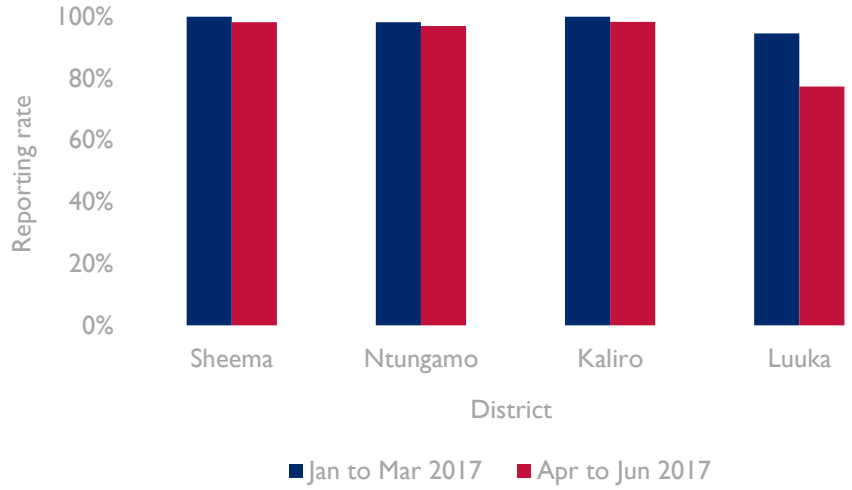
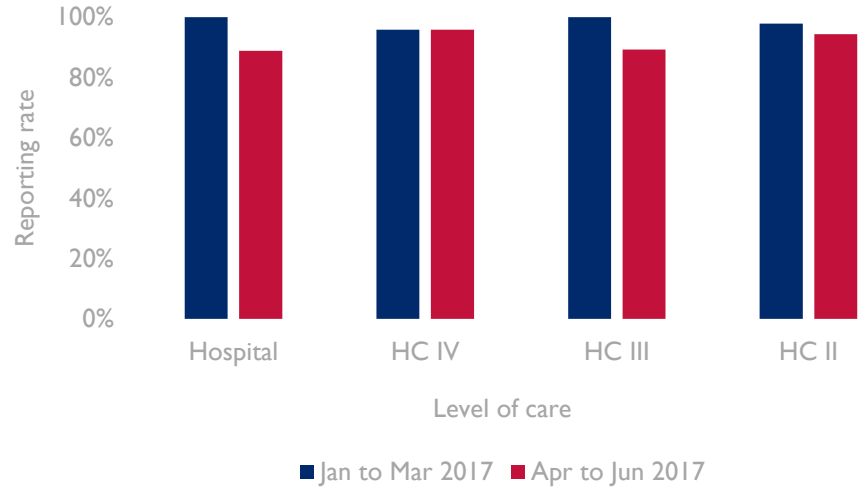


Figure 5: Completeness of HMIS reporting (HMIS Form 105) by level of care.



The assessment also examined data accuracy by identifying data discrepancies between the HMIS and registers. A data quality check was conducted that compared U5 cases recorded in the OPD Register to those cases reported in the HMIS. Major discrepancies were found in Luuka for OPD reporting and in Kaliro for inpatient reporting, in which the HMIS forms grossly under-reported cases compared to those reported in the registers (Table 46).

Table 46: Data discrepancies between OPD Register and HMIS forms at HFs by district.

OPD U5 cases (Apr-Jun 2017)	Register	HMIS	% of discrepancy
Luuka	14,922	11,410	23.5
Kaliro	11,049	10,688	3.3
Ntungamo	14,227	12,975	8.8
Sheema	8,567	7,841	8.5
In-Patient cases	**Register**	**HMIS**	**% of discrepancy**
Luuka	836	884	-5.7
Kaliro	636	376	40.9
Ntungamo	1,849	1,625	12.1
Sheema	1,015	981	3.3

The assessment also reviewed reporting rates of VHT quarterly reports (e.g., HMIS Form 097b) that were submitted by VHTs to the HFs and into HMIS by the District Biostatisticians or designees in the demonstration districts. Results indicated a major gap in community reporting, mainly attributed to a shortage of reporting materials such as registers and HMIS forms. All districts except Sheema, didn't submit any VHT quarterly reports on community data, and in Sheema only 18 HFs submitted community health data reports for the period of April to June 2017 (Table 47).

Table 47: HFs that submitted community health data reports into DHIS2 by district.

Districts	January – March 2017	April – June 2017
Kaliro	0	0
Luuka	0	0
Ntungamo	0	0
Sheema	0	18 (40.9%)

Efforts to revitalize community reporting in the demonstration districts will be a focus for MCSP moving forward, starting with reducing stock-outs of reporting materials and collaboration with RHITES partners to orient both VHTs and HF workers on community data collection tools, in addition to the importance of complete and timely submission of reports.

Objective 2: Determine baseline service utilization levels and case management practices for three priority childhood illnesses: malaria, diarrhea, and pneumonia.

As part of the baseline assessment, data from the OPD Registers and HMIS forms were extracted for the quarter to determine case management practices for common childhood illnesses, including pneumonia, diarrhea and malaria. Analysis of these case management practices considered data from the OPD Register to provide the caseload and treatment practices. This information gave an understanding of caseloads, as well as the percentage of diagnosed cases that received appropriate treatment, and also a benchmark to monitor the changes in these parameters over the implementation period through quarterly and endline assessments.

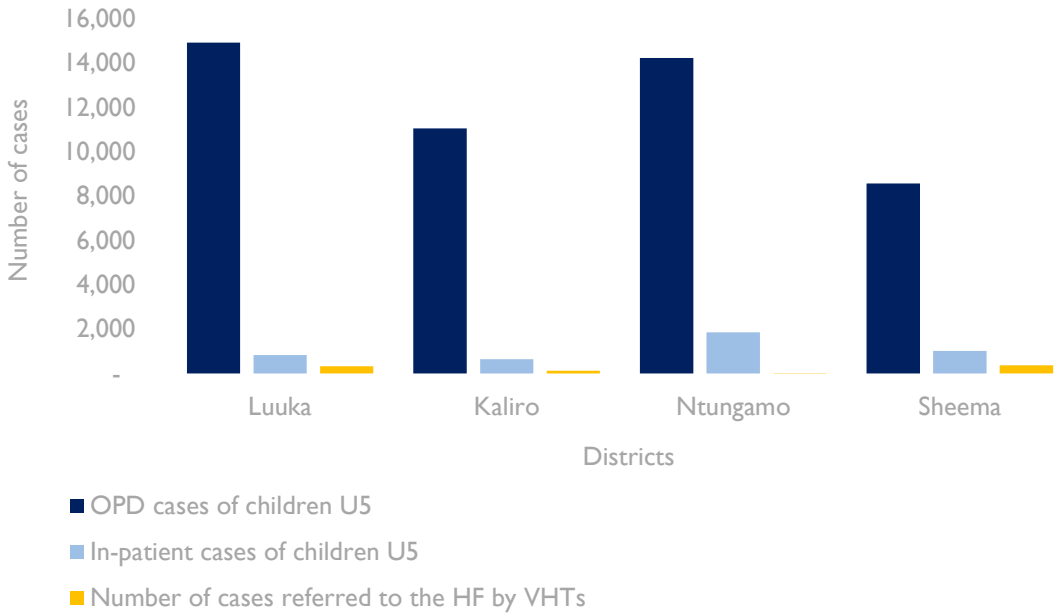
Figure 6 presents the total caseload of sick U5 children who sought care at the HFs and were referred from the communities by the VHTs during the period of the baseline assessment. As expected, most of the cases were seen at the OPD. The outpatient caseload was about 15,000 in Luuka and over

10,000 in Kaliro. The number of inpatient cases was around 700 in the EC region. The VHTs referred about 125-300 cases. In SW, about 15,000 cases sought treatment in Ntungamo and 8,500 in Sheema at the OPD, and about 1,850 cases in Ntungamo and 1,000 cases in Sheema were treated in-patient. The recorded cases from the VHT referral was only 10 in Ntungamo and approximately 370 in Sheema. The number of cases referred to the HFs by VHTs was very low, which is likely the result of poor record keeping and reporting. As indicated in Table 48, OPD caseloads were highest in HC IIs at 22,796, followed by HC IIIs at 16,042. The number of U5 illnesses seeking services at OPD was lowest at the hospital.

Table 48: Number of U5 cases in OPD and in-patient, and referred to HFs by VHTs by level of care.

Level of care	OPD U5 cases	In-Patient U5 cases	U5 cases referred to HFs by VHTs
Hospital (N=3)	2,155	1,305	20
HC IV (N=9)	6,677	1,744	292
HC III (N=34)	16,042	1,156	228
HC II (N=100)	22,796	131	298
Other (N=1)	1,095	0	0
Total (N=147)	**48,765**	**4336**	**838**

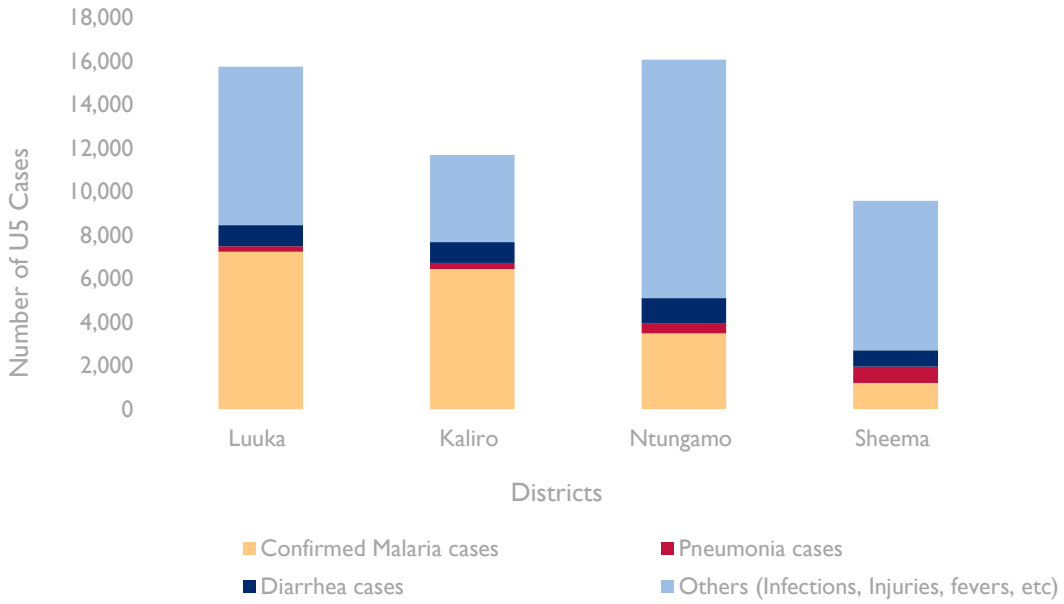
Figure 6: Sick U5 caseloads in OPD, in-patient and referred by VHTs by district.



Analyses indicate that malaria[9] is still the largest contributor of OPD/in-patient cases in the HFs among U5 (Figure 7). The "other" category constitutes a major share in three of the four districts and includes other infections, injuries, fevers, etc. Review of the DHIS2 and HMIS tools also identified challenges in the classification of illnesses indicated in the registers. In this regard, health workers and Records Assistants have categorized these illnesses in the "other" category. Going forward MCSP will leverage the planned review and update of the national HMIS tools and DHIS2 database to update classifications used for childhood illnesses; and will also support Records Assistants with the classification process to better understand the main causes of OPD consultations.

[9] Fever cases with a positive RDT or microscopy after testing during a HF visit.

Figure 7: Contribution of malaria, diarrhea and pneumonia cases to U5 in OPD by district.



The practice of providing proper treatment for pneumonia was less common compared to diarrhea. In EC, the number of U5 cases diagnosed as pneumonia were 239 and 279, respectively, in Luuka and Kaliro. However, only 30% of pneumonia cases in Luuka and a fourth of pneumonia cases in Kaliro were reported to have been treated with Amoxicillin DT. On the other hand, the caseload for diarrhea was over 900 in both Luuka and Kaliro, with nearly three fourths of U5 diarrhea cases treated with ORS and Zinc in Luuka and 58% in Kaliro.

In Ntungamo of SW region, about three-fourths of U5 pneumonia cases who sought care at HFs were treated with Amoxicillin DT, compared to 38% in Sheema (Table 49). Children receiving proper treatment for diarrhea was high in both districts, between 84%-95% (Table 50).

Table 49: U5 cases of pneumonia and pneumonia cases treated appropriately with Amoxicillin DT by district.

District	# of U5 pneumonia cases	Pneumonia cases treated with Amoxicillin DT	% of pneumonia cases treated with Amoxicillin DT
Luuka (N=36)	239	75	31.4%
Kaliro (N=20)	279	74	26.5%
Ntungamo (N=54)	477	367	76.9%
Sheema (N=37)	764	289	37.8%
Total (N=147)	**1,759**	**805**	**45.7%**

Table 50: U5 cases of diarrhea and diarrhea cases treated appropriately with ORS + Zinc by district.

District	# of U5 diarrhea cases	Diarrhea cases treated with ORS + Zinc	% of diarrhea cases treated with ORS + Zinc
Luuka (N=36)	972	709	72.9%
Kaliro (N=20)	956	556	58.2%
Ntungamo (N=54)	1,147	969	84.5%
Sheema (N=37)	742	702	94.6%
Total (N=147)	**3,817**	**2,936**	**76.9%**

Table 51: U5 cases of pneumonia and pneumonia cases treated appropriately with Amoxicillin DT by level of care.

Level of care	# of U5 pneumonia cases	Pneumonia cases treated with Amoxicillin DT	% of pneumonia cases treated with Amoxicillin DT
Hospital	291	143	49.1%
HC IV	467	162	34.6%
HC III	578	306	52.9%
HC II	419	190	45.3%
Total	**1,755**	**803**	**45.7%**

Table 52: U5 cases of diarrhea and diarrhea cases treated appropriately with ORS + Zinc by level of care.

Level of care	# of U5 diarrhea cases	Diarrhea cases treated with ORS + Zinc	% of diarrhea cases treated with ORS + Zinc
Hospital	241	166	68.9%
HC IV	541	412	76.1%
HC III	1,171	905	77.3%
HC II	1,800	1,390	77.2%
Total	**3,753**	**2,873**	**76.5%**

Caseloads of U5 with fever were high in all districts, especially in Luuka and Kaliro for the period of July to September 2017. As shown in Table 53, about 85% of all fever cases in EC were tested with RDT and/or microscopic examination for malaria, and more than 65% of fever cases were diagnosed as malaria. Almost all cases were treated with ACT in Luuka, with 88% of cases treated with ACT in Kaliro. In SW, above 99% of U5 fever cases in Ntungamo and 94% in Sheema were tested for malaria at HFs, and around 35% of these cases were diagnosed as malaria. Nearly everyone diagnosed with malaria was treated with ACT. Table 54 shows testing and treatment by level of care.

Table 53: U5 cases of fever, confirmed malaria cases, and confirmed malaria cases treated appropriately with ACT by district.

District	# of U5 fever cases	# of fever cases with RDT and/or microscopy testing	% of fever cases with RDT and/or microscopy	# of fever cases with positive RDT and/or microscopy	# of malaria cases who received ACT	% of malaria cases who received ACT
Luuka (N=36)	11,019	9,302	84.4%	7,248	7,187	99.2%
Kaliro (N=20)	9,277	8,105	87.4%	6,454	5,688	88.1%
Ntungamo (N=54)	8,183	8,146	99.5%	3,482	3,401	97.7%
Sheema (N=37)	3,789	3,573	94.3%	1,198	1,198	100.0%
Total (N=147)	**32,268**	**29,126**	**90.3%**	**18,382**	**17,474**	**95.1%**

Table 54: Number of U5 cases of fever, confirmed malaria cases, and confirmed malaria cases treated appropriately with ACT by level of care.

Level of care	# of U5 fever cases	# of fever cases with RDT and/or microscopy testing	% of fever cases with RDT and/or microscopy	# of fever cases with positive RDT and/or microscopy	# of malaria cases who received ACT	% of malaria cases who received ACT
Hospital	1,005	1,005	100.0%	602	602	100.0%
HC IV	3,739	3,616	96.7%	2,049	1,838	89.7%
HC III	10,375	9,205	88.7%	5,361	5,111	95.3%
HC II	16,151	14,302	88.6%	10,130	9,695	95.7%
Total	**31,270**	**28,128**	**89.9%**	**18,142**	**17,246**	**95.1**

Figure 8 below shows the cases of severe acute malnutrition seeking treatment at HFs in the four demonstration districts. Table 55 shows the cases of severe acute malnutrition by level of care. The number of reported cases of severe acute malnutrition was highest in Kaliro and at HC IVs.

Figure 8: Number of U5 cases (6-59 months) of severe acute malnutrition by district.

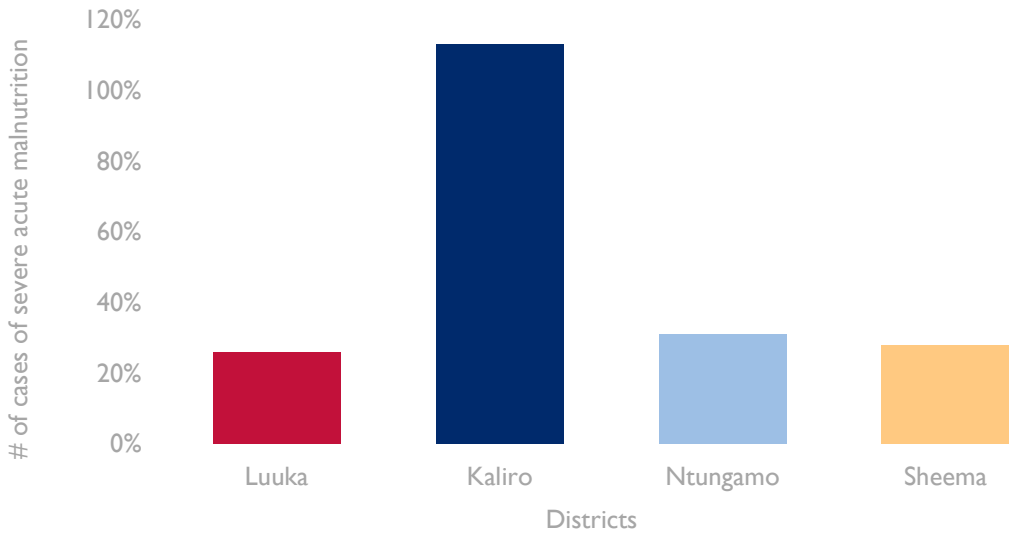


Table 55: Number of U5 cases of severe acute malnutrition by level of care.

	Hospital	HC IV	HC III	HC II
Number of U5 cases of severe acute malnutrition	13	117	37	31

5. Recommendations

The following recommendations are to address readiness and capacity of the four districts and HFs to deliver the ECHP:

1. National Level policy guidelines to support delivery of the ECHP

There is need to update the classification for childhood illnesses used in the HMIS and DHIS2. MCSP will leverage the planned review and update of the national HMIS and DHIS2 to support the MoH to update classifications for childhood illnesses in the HMIS tools and DHIS2.

There is need to ensure regular **availability of key HMIS tools** that correctly capture CH data for planning and monitoring of CH service delivery at all levels of care. The source of the HMIS tools is the NMS[10] and therefore, further exploration will be done to determine the factors behind the stock-outs and identify appropriate solutions to ensure regular supply from the NMS. The availability of these tools will also be critical for documentation of MCSP's CH learning. It is recommended that short-term measures, including direct purchasing, be explored if the gap persists after MCSP starts.

There is need to reorient and re-activate the national IMNCI master trainers team, which has not been fully functional for over five years. The team once re-oriented should be used to build and train teams at sub-national level, the two RHITES regions, and the four demonstration districts to support refreshing of frontline health workers on updated guidelines for child case management.

There will also be need to update the national IMNCI job aids, which were last updated in 2008. MCSP will support the MOH to review and update the IMNCI job aids to be aligned to the latest WHO and MOH guidelines and recommendations for management of childhood illnesses inclusive of nutrition, HIV, TB and early childhood care and development.

2. District level leadership, capacity and systems to support delivery of ECHP

There is the need to build and strengthen leadership and support for delivery of the ECHP. MCSP should work with the RHITES partners to build and strengthen leadership and support for delivery of the ECHP. This should include establishment and support of district-based IMNCI ToT teams and mentors to provide continuous support to front line health workers on provision of holistic CH services. MCSP should work with the RHITES partners to establish IMNCI ToT teams in each of the districts.

3. Health facility readiness to support delivery of an integrated package of child health interventions

Roll out and implementation of the ECHP will require **capacity building of available frontline health workers on IMNCI** to address the limited numbers of health workers trained on IMNCI in the last two years. Capacity building of available health workers on IMNCI will also help improve use of proper classifications of childhood illnesses and contribute to better understanding of the major causes of ill health among children. Equipping the districts with ToT teams should facilitate faster roll out of IMNCI training. Innovative approaches to minimize costs will need to be explored to cover the large number of existing staff who need to be trained. The significant gap in the number of established posts that are filled at HFs will call for innovative training approaches to minimize disruption of service delivery.

There are several **gaps in infrastructure and amenities at HFs** in the four demonstration districts. Direct intervention to address all of these gaps may not be feasible under the MCSP and RHITES program mandates. However, MCSP and RHITES may need to directly intervene to address some areas that are critical for demonstration of the ECHP including provision of basic equipment for assessment of children and equipment for ORT corners. MCSP and RHITES will need to collaborate and work with the district leadership to address the remaining gaps using existing district resources or other centrally-funded grants.

Availability of the essential CH commodities and supplies is very critical for the implementation of the ECHP. The MOH policy requires that all essential commodities and supplies are procured and supplied through the NMS and discourages parallel purchases and deliveries of commodities and supplies. MCSP with RHITES will therefore, need to engage very early and continuously with the MOH, NMS, and USAID's Uganda Health Supply Chain Program (UHSCP) to address the challenges of stock-outs of essential commodities.

[10] The Uganda National Medical Stores, established under the 1993 NMS Act, to procure, store, and distribute essential medications and medical supplies to all government health facilities across the country. https://www.nms.go.ug

Job aids for IMNCI and key family care practices, including counseling cards for caretakers of children, **should be availed to HFs**. These act as reminders for key practices, actions and messages needed for case management of children.

Improving case management for pneumonia and diarrhea should be prioritized across the demonstration districts. Additionally, priority should be given to maintain good practices for case management of malaria, while monitoring whether improved capacity for management of other childhood conditions helps to reduce mismanagement of children confirmed negative for malaria.

The **availability of functional QWIT teams** is needed to institutionalize the implementation of improved case management practices for children. There is a need to support HFs to activate QWITs using the national QI Framework, and also to provide guidance and support on the priority CH areas that can be addressed by the QWITs.

There is need to **strengthen community and health facility linkages through VHTs and other community structures** across the four districts, to empower communities to take part in the decisions that affect their health; mobilize communities for health programs; and facilitate adoption of healthy practices at household level. This will entail supporting the district and health facilities with tools and guidance on how to engage and support VHTs community engagement work within the national PHC policy framework and resource envelope.

There is a need to **strengthen health worker capacity to use catchment area data**, including engagement of communities to improve estimation of resources and determination of approaches for implementation of the ECHP. This should go beyond supporting HFs to have maps and plans, but also include support for the utilization of data to increase the coverage of preventive interventions such as immunization. Documentation of SS findings and development of action plans to address the SS findings is an area that will need to strengthened.

Finally, priority also needs to be given to improving **data accuracy and quality.** This will necessitate support to health workers and Records Assistants with the classification process to better understand the main causes of OPD consultations. Support will also be needed to improve community HMIS reporting rates and this should be informed by findings from the further exploration of the determinants of the poor reporting rates.

6. Conclusion

MCSP's baseline assessment focused on district and HF readiness to support delivery of CH services, including availability of basic human resources, infrastructure, equipment, essential commodities and supplies, and case management practices with information gathered through interviews, observations and review of HF records.

Overall, the readiness for the provision of an integrated ECHP was low across all districts and HFs, and indicates some of the key areas that will need to be prioritized by MCSP CH, in collaboration with the RHITES partners in the EC and SW regions. These include availability of essential commodities and equipment; case management practices; HF linkages with the community; and documentation and use of community service delivery data to improve delivery of CH services. The findings will also be used to benchmark changes, as well as document key learnings gained during implementation of the program. While specific for the four districts, the findings could also be used to indicate likely problem areas in delivery of CH services in other districts with similar basic demographic and infrastructure profiles.

Appendix 1. National IMNCI and MCSP District and Health Facility Assessment Tools

DISTRICT LEVEL ASSESSMENT
MCSP CHILD HEALTH PROJECT

Instructions: This questionnaire shall be completed at baseline and endline during a scheduled visit to the district to collect data on the status of the district in support for child health interventions and also to determine the improvement attributed to MCSP/RHITES collaboration on child health. Data will be collected by a technical staff from DHT or MCSP support teams during an interactive session with District Health Officer, Biostatistician, and ADHO. On arrival in district, district team need to be given some time to prepare the following documents, if available to facilitate the assessment; Micro plan, Micro-map, Micro-Map, REC categorization tool, Quarterly Review meeting minutes, Quality Work Improvement Team meeting minutes.

Start time of the interview : _____ End time of interview:_____

Name of Interviewer _____

SECTION 1: INTRODUCTORY INFORMATION

QN1	District Name	Luuka……1 Kaliro……..2 Ntungamo…….…..3 Sheema……..…..4	
QN2	Name and Designation of the Respondent	DHO ……...……...…….1 ADHO (MCH) ……....2 Biostat…….…….3 Other, specify……...……4	Male ……..1 Female ……..2
QN3	Number of Sub-counties in the district	_____	
QN4	Number of Parishes in the district	_____	
QN5	Number of Villages in the district	_____	

QN6	Total number of functional health facilities in the district *(A facility is said to be functional if it has staff recognized by local government and is offering health services) - Count public, PFPs and PNFPs captured in DHIS2 / Biostatistician records*	
QN7	Total number of functional health facilities in the district reporting in DHIS 2 *(A facility is said to be functional if it has staff recognised by local government and is offering health services) - Count public, PFPs and PNFPs captured in DHIS2 / Biostatistician records*	
SECTION 2: District Staffing Levels for Selected Cadres		
QN8	Are all the DHMT positions filled (Please ensure to probe if the person holding the position is not acting)	Yes ……..……1 No……..……2
	Are the following positions still vacant (Indicate "Yes" if the individual is acting in that position)	
QN9	District Health Officer	Yes ……..……1 No……..……2
QN10	ADHO - MNCH	Yes ……..……1 No……..……2
QN11	ADHO - Environment	Yes ……..……1 No……..……2
QN12	Health Education Officer	Yes ……..……1 No……..……2
QN 13	District Drug Inspector	Yes ……..……1 No……..……2
QN 14	Biostatistician	Yes ……..……1 No……..……2
QN 15	Stores Manager	Yes ……..……1 No……..……2
	Complementary district Functionality Variables	
QN 16	Do you have a functional VHT system in place reporting through the district structures	Yes ……..……1 No……..……2

QN 17	How many VHTS are active and reporting in your district?		
QN 18	Is there a District QI Committee?	Yes ……..……1 No…….……2	
QN 19	If YES, how functional is it? (1. Not Functional; 2. Poorly Functional; 3. Very Functional)	Not Functional.....1 Poorly Functional.....2 Very Functional.....3	
QN 20	Is there a macro-plan integrating child health interventions?	Yes ……..……1 No…….……2	
QN 21	If Yes, who is involved in the development of this macro-plan (Tick all that apply)	Health Facility In-charges……..1 DHT .....2 Local Councilors.....3 VHTs.....4 Others, Specify 5	
QN 22	Were child health interventions planned in the previous FYs prepared to cover the entire district including the hard to reach areas?	Yes ……..……1 No…….……2	
QN 23	Does the district have a map of its catchment area population?	Yes ……..……1 No…….……2	
QN 24	Are the populations for this macro-map updated based on the most recent Uganda Bureau of Statistics (UBOS) population census statistics / projections for the current financial year?	Yes ……..……1 No…….……2	
QN 25	Do all the health facilities map out their catchment areas as planning tool?	Yes, all facilities……1 Yes, some facilities.....2 No.....3	Number.....
QN 26	Does the district have a completed monitoring chart with child health performance data up-to-date to the	Yes ……..……1 No…….……2	

	most quarter? *(Please verify the response with visibility of the completed monitoring chart)*		
	Capacity building and IMNCI training		
QN 27	Does the district operational work plan have a capacity building and management plan to include child health tailored trainings?	Yes ……..……1 No……..……2	
	Are any of the trainings listed below part of the capacity building and management plan?		
	Intervention		
QN 28	Child survival strategy orientation	Yes ……..……1 No……..……2	
QN 29	Immunization in Practice training	Yes ……..……1 No……..……2	
QN 30	Integrated community case management training	Yes ……..……1 No……..……3	
QN 31	IMNCI training	Yes ……..……1 No……..……2	
QN 32	Mid-level Managers training	Yes ……..……1 No……..……2	
QN 33	Does the District have IMNCI trainers?	Yes ……..……1 No……..……2	
QN 34	When were they trained?	……Year	……Month
QN 35	How many were trained?	……..	
QN 36	Of those, how many are available in the district?	……..	
QN 37	When was last District spear-headed training for IMNCI conducted?	……Year	……Month
QN 38	Total number of staff trained in the district training of IMNCI	…….	

QN 39	Which training mode was used in the above mentioned training? ***(Mark all that apply)***	ICATT……1 Blended learning……2 Face to face training……3	Comment…… ……
	SUPPORTIVE SUPERVISION		
QN 40	Did the district conduct Integrated Supported Supervision (ISS) among health facilities in which child health performance is monitored in the last quarter?	Yes ……..……1 No……..……2	
QN 41	If ISS was planned but not conducted, what were the main reasons for cancellation?		
	i……..……..		
	ii……		
	iii……..		
QN42	Did the district hold a quarterly review meeting in the last quarter of the Fiscal Year? *(Ask for a copy of the meeting's minutes, if available)*	Yes ……..……1 No……..……2	
QN43	Was any of the following non-traditional stakeholders in attendance?	Political leaders (e.g., Local Councils , Councilors)……1 Civil leaders (Senior Assistant Secretaries, etc.,).....2 Religious leaders.....3 Others, specify.....4	
QN44	What were the key child health topics that were discussed at the last quarterly review meeting?		
	i…… ii……		
	iii……..		
QN 45	How many health facilities received supportive supervision in last quarter?	Number……	
QN 46	For how many health facilities was data quality assessment (DQA) done during technical support	Number……	

	supervision? *(Refer to reports to determine sites with a record of recounts/ data verification analysis done)* Number.....	
QN 47	If no DQA done during supervision, state the reasons	
	i……	
	ii……	
	iii…….	
	SUSTAINABILITY OF CHILD HEALTH SERVICES (refer to records of the non-conditional grant for the district)	
	Enter total amount in Uganda Shillings of the non-conditional grant disaggregated as follows;	

QN 48. Total allocated to health	QN 49. Total allocated to child health improvement activities	QN 50. Amount released for Child Health improvement activities in the last two quarters

	AVAILABILITY OF REPORTING TOOLS	
	Indicate the number of days of stock-out experienced by the district (if any) for any of the following HMIS tools under review (A stock-out means that there was none left in the district store)	
	HMIS tools	**No. of stock-out days (if any)**
QN51	HMIS FORM 096: QUARTERLY HOUSEHOLD SUMMARY	
QN52	HMIS FORM 097: VHT/ICCM QUARTERLY REPORT	
QN53	HMIS FORM 032: REFERRAL NOTE	
QN54	HMIS FORM 105: HEALTH UNIT OUTPATIENT MONTHLY REPORT	
QN55	HMIS FORM 073: CHILD REGISTER	
QN56	VHT REGISTER	
QN57	HMIS FORM 031: OUTPATIENT REGISTER	

THANK YOU FOR YOUR COOPERATION

HEALTH FACILITY ASSESSMENT
MCSP CHILD HEALTH PROJECT

QUESTIONNAIRE SERIAL NO……

Instructions: This questionnaire shall be completed at baseline and endline during a scheduled visit to the health facility to collect data on the status of the health facility systems in support for child health interventions and also to determine the improvement attributed to MCSP/RHITES collaboration on child health. Data will be collected by a technical staff from DHT or MCSP support teams during an interactive session with health facility In-charge, records officer / assistant. On arrival at each health facility, staff need to be given some time to prepare the following documents, if available to facilitate the assessment; Micro plan, Micro-map, Micro-Map, REC categorization tool, Quality Work Improvement Team meeting minutes.

Start time of interview : _____ End time of interview:_____

Name of Interviewer _____

	Identification	
QN1	Name of Health Centre	_____
QN2	Level of Health Centre	Hospital …….1 HC VI…..……2 HC III……...……3 HC II……...….4 Others, specify…..…….5
	Details of Respondent	
QN3	Gender	Male ……1 Female ……2

QN4	Designation of Respondent	Health Facility In charge……1 Clinical Officer……2 Pharmacist……3 Mid Wife……4 Others, Specify……5
QN5	District	Luuka……1 Kaliro……..2 Ntungamo……...….3 Sheema……...…..4
QN7	Location of the Health Facility	Rural …….1 Urban ……2
QN8	Number of Villages served by Health Facility	_____
QN9	Population catchment area of the Facility	_____
QN10	Whether the Health Centre functions for 24 hours	Yes ……1 No……...……2
QN11	Ownership running the health facility	NGO owned……..……1 Public……2 Privately owned…….3 Others, Specify…….4
	General Health Facility Service Environment	
QN12	Does the facility have the current catchment area map of parishes/villages displayed? *Please verify if catchment area map is displayed*	Yes ……..…….1 No……..……2

QN13	Did the health facility receive support supervision in the last quarter?	Yes ……..……I No……..……2
QN14	Does the health facility keep record of the support supervision findings?	Yes ……..……I No……..……2
QN15	Does the health facility have action plans and have evidence of actions against the improvement plan?	Yes ……..……I No……..……2
QN16	Does the OPD clinic have hand washing facilities with soap and running water in ;	
	a) in the consultation room	Yes ……..……I No……..……2
	b) in the patient treatment room	Yes ……..……I No……..……2
	c) in the mother baby clinic/ Immunization area	Yes ……..……I No……..……2
QN17	Does the facility have clean sanitary facilities for staff and patients / clients?	
	Latrines or toilets exist within the facility or facility compound.	Yes ……..……I No……..……2
	Staff and clients have access to at least one latrine or toilet	Yes ……..……I No……..……2
	Soap and water are available at the washing point near the toilet(s) / latrine(s).	Yes ……..……I No……..……2
QN18	Is the facility compound well maintained?	Yes ……..……I No……..……2

QN23	Does the health facility have an OPD clinic area with clear designated space for patient registration and triage?	Yes ……..……..1 No……..……2
QN24	Does the OPD clinic have designated room for patient consultation that offer Visual privacy for clients?	Yes ……..……..1 No……..……2
QN25	Does the OPD clinic have designated room for patient consultation that offer Auditory privacy for clients?	Yes ……..……..1 No……..……2
QN26	How does the health facility predominantly dispose its health care waste?	Incineration……1 Open pit dumping……..2 Open pit dumping and burning…....3 Off-site disposal……..4 Others……5

	Availability of Human Resources			
	How many staff work in this health facility, disaggregated by cadre? And those who have received relevant training for delivery of child health services?			
	Cadres	Expected number of staff	No. of staff currently in the health facility	No. of staff transferred to other health facilities / work stations within /outside the district in the past 6 months
QN26	Doctors			
QN27	Clinical Officers			
QN28	Other Allied Professionals e.g. Lab, Dispensers, Dental assistants, Orthopedics, etc.			
QN29	Registered Nurse			
QN30	Registered Mid-wives			
QN31	Enrolled Nurse			
QN32	Enrolled midwife			

QN33	Comprehensive nurse-enrolled		
QN34	Comprehensive nurse registered		
QN35	Nursing Assistant(s)		
QN36	Records staff		
QN37	Support staff		
QN38	Does the health facility have the following national guidelines/Job AIDES? Are the guidelines?		Yes ……..……..1 No……..……2
QN39	Immunization in Practice Guidelines/Standards		Yes ……..……..1 No……..……2
QN40	UNEPI Immunization Schedule chart		Yes ……..……..1 No……..……2
QN41	UNEPI Vaccines management poster/chart		Yes ……..……..1 No……..……2
QN42	IMNCI chart booklet	Version…….	Yes ……..……..1 No……..……2
QN43	IMNCI posters		Yes ……..……..1 No……..……2
QN44	IMNCI counselling charts		Yes ……..……..1 No……..……2
	CHILD HEALTH		
	Micro-planning		
QN45	Did VHTs participate in the development of the current micro-map? *(Indicate "Yes" if the meeting attendance list include VHTs)*		Yes ……..……..1 No……..……2

QN46	Is the Health facility the catchment area micro-map available and displayed showing health provider assigned for every village? *Please verify if the catchment population and villages are indicated*	Yes ……..……..I No……..……2
	Data Analysis and use	
QN47	Does the facility have a hard copy of the updated monitoring chart for any of child health indicators? *(Review the list of indicators for verification)*	Yes ……..……..I No……..……2
QN48	Does the facility have any child health performance monitoring chart for any indicator pinned up for some or all months of the current financial year	Yes ……..……..I No……..……2
QN49	Did the facility hold any VHT quarterly meeting in the last quarter?	Yes ……..……..I No……..……2
QN50	Did the facility collect, aggregate and submit VHT quarterly report to the district in the last quarter *(Please verify whether a copy of the report is on file -Form 096 and 097 for a "Yes")*	Yes ……..……..I No……..……2
	Quality Work Improvement Team meetings	
QN51	Is there a Quality Improvement Team at the health facility? (Indicate "Yes" if members are listed in a document at the health facility e.g. minute book)	Yes ……..……..I No……..……2
QN52	Did the facility hold a QWIT meeting which addressed child health during the last quarter? *(Please verify if minutes of the meeting are on file)*	Yes ……..……..I No……..……2

QN53	Record review meetings held by the health facility QWITs during the past quarter (Starting with the latest)		
	Date of the Review meeting	Child Health issues Discussed	
	1……..……..	Yes ……..……..1 No……..……2	
	2……..……	Yes ……..……..1 No……..……2	
	3……...…….	Yes ……..……..1 No……..……2	
	4……...…….	Yes ……..……..1 No……..……2	
QN54	Was any of the following non-traditional stakeholders in attendance?	Political leaders (e.g., Local Councils, Councilors)…….……1 Civil leaders (Senior Assistant Secretaries, etc.).....2 Religious leaders.....3 Others, specify.....4	
	DATA MANAGEMENT		
	Are the following HMIS tools available and in use?	Availability	In use *(Verify with samples of completed forms)*
QN55	HMIS FORM 096: QUARTERLY HOUSEHOLD SUMMARY	Yes ……..……..1 No……..……2	Yes……..1 No……2
QN56	HMIS FORM 097: VHT/ICCM QUARTERLY REPORT	Yes ……..……..1 No……..……2	Yes……..1 No……2

QN57	HMIS FORM 032: REFERRAL NOTE	Yes ……..……..1 No……..……2	Yes……..1 No……2
QN58	HMIS FORM 105: HEALTH UNIT OUTPATIENT MONTHLY REPORT	Yes ……..……..1 No……..……2	Yes……..1 No……2
QN59	HMIS FORM 073: CHILD REGISTER	Yes ……..……..1 No……..……2	Yes……..1 No……2
QN60	HMIS FORM 031: OUTPATIENT REGISTER	Yes ……..……..1 No……..……2	Yes……..1 No……2
QN61	VHT REGISTER	Yes ……..……..1 No……..……2	Yes……..1 No……2
QN62	IMMUNIZATION CARDS / MOTHER'S PASSPORT	Yes ……..……..1 No……..……2	Yes……..1 No……2
QN63	MEDICAL FORM 5 (in triplicate form)	Yes ……..……..1 No……..……2	Yes……..1 No……2
QN64	How does the health facility register the children served during the past 3 months?	All in one single register (both static and outreach)……1 One register for static and another for outreach records……2 Separate registers per service delivery point……..3	
QN65	Is there any evidence (in form of documentation) of internal DQAs done e.g. summaries of recounts done by the staff to identify discrepancies and develop strategies for improvement in the last quarter?	Yes ……..……..1 No……..……2	

QN66	Was the last HMIS report on submitted to the district on time *(Verify if form 105 and 097 were completed and submitted)* If yes, Indicate the date of submission ……..	Yes ……..……I No……..……2
QN67	Did the health facility submit all the weekly surveillance reports **(Form 033b)** of the last quarter	Yes ……..……I No……..……2
QN68	Number of weekly submitted reports verified by the assessor	Number ……
	SERVICES OFFERED BY HEALTH FACILITY DURING THE LAST QUARTER	
QN69	Out patient management of common childhood illnesses including malaria, diarrhea, pneumonia and malnutrition *(IMNCI guidelines)*	Yes ……..……I No……..……2
QN70	Health education on key family care practices for child health-Hygiene and sanitation; IYCF; timely care seeking	Yes ……..……I No……..……2
QN71	Early cognitive stimulation and responsive care giving/ECD services	Yes ……..……I No……..……2
QN72	Routine immunization services: with static and mobile/outreaches;	Yes ……..……I No……..……2
QN73	Nutrition assessment and counselling	Yes ……..……I No……..……2
QN74	Growth and development monitoring and counselling	Yes ……..……I No……..……2
QN75	Routine deworming for children	Yes ……..……I No……..……2

QN76	Participates in population schedulable services/Child Health days twice a year	Yes ……..……1 No……..……2
QN77	HIV testing and counselling for children	Yes ……..……1 No……..……2
QN78	HIV care and treatment for children	Yes ……..……1 No……..……2
QN79	Pediatric TB testing	Yes ……..……1 No……..……2
QN80	Pediatric TB treatment	Yes ……..……1 No……..……2
QN81	Blood transfusion services for children with anemia	Yes ……..……1 No……..……2
QN82	Oxygen therapy for children with hypoxia	Yes ……..……1 No……..……2
QN83	Oral and intravenous rehydration therapy for dehydration	Yes ……..……1 No……..……2
QN84	In patient management of children with severe illness	Yes ……..……1 No……..……2

Does the facility have the following tracer medicines and commodities for child care? Any stock-outs in the past 3 months?

	Tracer Commodities for child health	**Available**	**Stock-out experienced in last 3 months?**	**Duration of stock-out in days**
QN85	Mebendazole / Albendazole	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	

QN86	ORS	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN87	Zinc tablets	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN88	Amoxicillin dispersible tabs	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN89	Amoxicillin suspension	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN90	Artemether-lumefantrine	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN91	Artemether-amodiaquine tabs	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN92	Cotrimoxazole tabs(20/100mg)	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN93	Rapid Diagnostic Tests (RDTs) for malaria	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN94	Reagents for smear HIV (Including PCR tests	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN95	Injectable ampicillin	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN96	Injectable cloxacillin	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN97	Injectable gentamicin	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	

QN98	Injectable cefatriaxone	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN99	Injectable diazeapam	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
	Vaccines			
QN100	BCG	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN101	Polio vaccine	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN102	DPT-HiB-HepB vaccines	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN103	Measles vaccine	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN104	Tetanus Toxoid	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN105	Pneumococcal Conjugate Vaccine (PCV)	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
	Commodities			
QN106	5-10% Dextrose	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN107	5% Normal saline	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN108	Oxygen	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	

QN109	Blood products	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN110	Syringes and needles (auto disposable)	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN111	Gas or paraffin for immunization refrigerator(If applicable)	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN112		Does the health facility have functional equipment for Child health care? (*Ask, request to see equipment to confirm availability and also check if functional)*	Yes ……..……1 No……..……2	
	Out Patient Department	**Availability**	**Functional**	**Comment**
QN113	Thermometer	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN114	Child Weighing scale,	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN115	Child BP Machine	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN116	Pediatric Stethoscope	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN117	ORT corner with following equipment (cup; container for ORS; table)	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	

QN118	Length / Height meter	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN119	Clock	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN120	Respiratory rate timers	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN121	Ophthalmoscope	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN122	Otoscope	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN123	X-ray film viewer	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
	Mother Baby Clinic/Young Child Clinic			
QN124	Vaccine carrier with ice packs	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN125	Refrigerator	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN126	Mid Upper Arm Circumference(MUAC)	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN127	Child weighing scale	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN128	Child weight for height chart	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	

QN129	Child weight for length chart	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
	Pediatric/Children's ward			
QN130	Oxygen cylinder	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN131	Emergency trolley	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN132	Drip Stands	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN133	Oxygen concentrator	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN134	Ambu bag(1500 ml)	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN135	face masks (sizes 00, 0 1, 2, 3, 4, 5)	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN136	Oropharyngeal airways	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN137	Pulse oximeters	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN138	Portable suction machine	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	

QN139	Nebuliser	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN140	Nasal prongs	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN141	Peadiatric stethoscope	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN142	Pediatric BP machine-child cuff	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN143	Guedel's airway -01,02, 03-set	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
QN144	Clock	Yes ……..……1 No……..……2	Yes ……..……1 No……..……2	
	Review treatment records in OPD child register and HMIS forms- for last quarter) the following information. Period ……			

		Child Register	HMIS forms
QN145	OPD cases of children under five years of age		
QN146	IN-PATIENT cases of children under five years of age		
QN147	Number of cases referred to the Health facility by VHTs		
QN148	Number of child cases of children under five years of age who had confirmed pneumonia		
QN149	Number of child cases of children under five years of age of pneumonia who were prescribed dispersible amoxicillin		
QN150	Number of child cases of children under five years of age who had diarrhea		

QN151	Number of child cases of children under five years of age with diarrhea who were prescribed ORS alone		
QN152	Number of child cases of children under five years of age with diarrhea who were prescribed both ORS and Zinc		
QN153	Number of child cases of children under five years of age who had fever		
QN154	Number of child cases of children under five years of age who had positive RDT result for malaria		
QN155	Number of cases of children under five years of age who are RDT positive and or microscopic		
QN156	Number of cases of children under five years of age diagnosed with malaria through RDT testing at HFs who received ACT treatment		
QN157	Number of child cases (6-59 months) with severe Acute Malnutrition		
THANKS FOR YOUR COOPERATION			