inter aide

Lancement et suivi de programmes concrets de développement

Baseline Survey Report

Child Health Program
Central Region, Malawi
2014

8 June 2014

Data collection by

Benson Chidaomba
Burton Saiwala
Christopher Masina
Gertrude Kalirangwe
Ignatius Liphuka
Jenkins Banda
Lesta Phiri
Moses Enoch

Supervision and analysis by

Precious Phiri
Sam Chirwa
Lloyd Chauwa

Report prepared by

Piroska Bisits Bullen
Program Manager, Child Health Program
Central Region, Malawi
PO BOX 31405 Lilongwe 3
Phone: +265 997 619 734
Email: interaide.health.LL@gmail.com

Acronyms

ADC	Area Development Committee
AEHO	Area Environmental Health Officer
ARI	Acute Respiratory Infection
CO	Clinical Officer
DEC	District Executive Committee
DEHO	District Environmental Health Officer
DHO	District Health Office or District Health Officer
DNO	District Nursing Officer
GPS	Global Positioning System
GVH	Group Village Headmen
HSA	Health Surveillance Assistant
IMCI	Integrated Management of Childhood Illnesses
IUD	Intra-Uterine Device
LA	Lumefantrine and artemether (malaria medication)
MA	Medical Assistant
MDHS	Malawi Demographic Health Survey
M&E	Monitoring and Evaluation
MoH	Ministry of Health
NGO	Non-Governmental Organization
ORS	Oral Rehydration Salts
PPP	Purchasing Power Parity
PPI	Progress out of Poverty Index
TA	Traditional Authorities
TBA	Traditional Birth Attendant
VDC	Village Development Committee
VHC	Village Health Committee

Contents

Tables

Executive Summary

Background

Inter Aide has been running a child health program in the central region of Malawi since 1991. In 2014 Inter Aide is piloting a new three year program to address child morbidity and mortality. The program aims to address barriers to healthy behaviors at both the family and the system level.

In January 2014 a baseline survey was conducted for the pilot program. The purpose of the survey is to validate the problems identified during qualitative stakeholder meetings. It will also allow for the project results to be measured using a baseline and endline survey. The endline survey will be conducted three years later in January 2017.

The purpose of this report is to document the methodology and results of the baseline survey. Discussion on how these results impact the design of the pilot program can be found in the Program Document.

Methodology

A quasi-experimental design will be used to measure the results of the pilot project. This means that villages in both the intervention area and a control area need to be surveyed both before and after the program. The intervention area is the catchment of Katchale Health Centre. The control areas are the catchments of Maluwa Health Centre and Chiunjiza Health Centre. These two areas were selected as controls because they are as close as possible to Katchale Health Centre in terms of size, remoteness and service level.

The survey questionnaire was developed and pre-tested by the program team. Many questions were adapted from the 2010 Malawi Demographic Health Survey (MDHS) to align with national statistics. Poverty was measured using the Progress out of Poverty Index (PPI) for Malawi.

Two-stage cluster sampling was used, stratified by HSA station. In the first stage 48 villages were randomly selected from the intervention area, with six villages from each of the eight HSA stations. In the two control areas 24 villages were randomly selected (48 control villages in total) with 6 villages taken from each of four HSA stations.

Within each village 10 households were selected using a random walk quota method. This gave a total of 480 households in the intervention areas and 480 in the control areas (240 per control area), with 960 households in total.

There are several limitations to the methodology. The first is that the population of villages was unknown and so sampling could not be done proportional to size. The use of a random walk sampling method for choosing households within villages may also miss more vulnerable households who are not at home at the time. Finally, only households with children under 5 years old were included. Therefore, the results can only be generalised to households with children under 5 years, not all households.

Key findings

The following results are for the **intervention area** of Katchale Health Centre. Most results in the control area were similar to the intervention area. For a comparison between the intervention and control areas see the Results section. The results were also similar to the national results in the 2010 MDHS. For a comparison between this baseline survey and the MDHS see the Indicators section.

Demographics

- The majority of women surveyed (88%) were aged 20-39 years.
- 68% were married to a monogamous husband and 27% to a polygamous husband.
- 31% had no education, 38% had only completed 1-4 years of school, and 28% had completed 5-8 years of school.
- 43% of households were below the national poverty line and 70% were below the international $1.25 PPP / day poverty line.
- The total number of children per household ranged from 1 to 12. The average number of children per household was 4.

Morbidity & Mortality

- 24% of children under 5 years had diarrhea in the last two weeks, 39% had fever, and 5% had symptoms of Acute Respiratory Infection (ARI).
- Neonatal mortality was 24 deaths per 1000 live births, infant mortality was 51 deaths per 1000 live births and under 5 mortality was 114 deaths per 1000 live births.
- 34% of under 5 deaths were due to neonatal causes, 21% due to fever / malaria, 21% due to cough / pneumonia, and 5% due to diarrhea.

Antenatal, Delivery & Postnatal

- 98% of women attended antenatal care for their most recent pregnancy. However, only 12% started in the first trimester. 91% attended three or more antenatal visits.
- 83% of women delivered their most recent pregnancy at the Health Centre. Of the women who delivered at home or with a Traditional Birth Attendant (TBA), 35% said it was due to the long distance to the facility, 21% due to lack of transport, and 33% because the birth happened unexpectedly. Only 12% said that they prefer traditional methods.
- 67% of women reported that they received a postnatal check after delivery. Of those who did receive a check, 84% reported that it was done within 1 hour after birth.

Family Planning

- 21% of women do not want any more children, and 66% want to wait before they have another child. 80% of women reported that decisions related to family planning are made jointly by the couple.
- 9% of women were pregnant at the time of the survey, and 66% of pregnant women reported that the pregnancy was unplanned (they either wanted to wait until later, or did not want any more children).
- Awareness of most modern family planning methods was above 90%.
- 63% of women were currently using a modern family planning method. Of these women, 73% were using injectables. Only 21% were using a long term method (female sterilisation, IUD or implant). 98% had told their husbands they were using a method.
- Of the women who were not using a method, 94% said they knew where to obtain one. The most common reasons for not using a method were that they were not having sex (23%) or they had a baby recently (23%).
- The unmet need for family planning is 30%.

Hygiene & Sanitation

- 83% of households use a borehole for drinking water. Only 11% use an unprotected well.
- 48% of households report that they do something to make the water safe for drinking. Of these households, 61% add chlorine.

- 78% of household have a pit latrine. However, 45% of these latrines are shared with other households.
- Only 6% of households had a hand washing facility, or any hand washing items present during the survey.

Bed Nets

- 24% of households do not own a bed net, 17% own a bed net but it was not hanging at the time of the survey, 54% own a bed net which was hanging at the time of the survey, and 5% of households did not give the enumerator permission to see the bed net.
- 61% of children under 5 years slept under a bed night the night before.

Health Seeking Behaviour & Treatment

- 67% of under 5 children with fever in the last 2 weeks were taken to a health facility for treatment, and 47% received antimalarials.
- 67% of under 5 children with diarrhea in the last 2 weeks were taken to a health facility for treatment, and 51% received Oral Rehyration Salts (ORS).
- 77% of under 5 children with ARI symptoms in the last 2 weeks were taken to a health facility for treatment.

Awareness

- More than 97% of women were aware of key health messages on antenatal care, health seeking behaviour, hand washing, sanitation and bed nets.
- Most of the women had heard the messages from health workers.

Religious Beliefs

- Only 0.4% of households reported that their religious beliefs prevent them from using modern health care.
- The households who reported this were Zionist (oppose vaccinations and delivery at the health center) and Jehovah's Witness (oppose blood transfusions).

Chief Involvement

- 31% of respondents had heard their chief talk about health issues. The most common topics were latrines (74%), hand washing (31%) and antenatal care and safe delivery (19%).
- 23% of respondents reported that their village had by-laws on some health issues. The most common topics were latrines (71%), antenatal care and safe delivery (38%), and hand washing (22%).

Male Involvement

- 35% of women said that they normally make decisions regarding health care for their children, 12% said it was their husband, and 52% decide jointly.
- 73% of women report that they care for the children when they are sick, compared to 3% of husbands, and 24% of couples who do it jointly.
- 25% of husbands have never accompanied their wife to an antenatal visit, 21% have attended once, 43% several times, and 9% every time.

Government Health Services

- 95% of households use Katchale Health Centre as their main health facility. Of these households, 93% had used it in the last 12 months. 61% rated the service as good, 30% average and 10% poor.
- Only 55% of respondents had personally met the HSA for their village. 24% said that the HSA had not visited their village in the last 12 months, 22% said they had only visited once, and 28% two to three times.
- 65% of households reported that they had access to a Mobile Clinic for vaccinations (this excludes the static clinic run at the Health Centre). Of these households, 83% had used the Mobile Clinic in the last 12 months. 80% rated the service as good, 18% average and 2% poor.
- In areas with a Village Clinic, only 57% of households were aware about the existence of the clinic. Only 8% of children with diarrhea and fever in the last 2 weeks were taken to the Village Clinic. None of the children with ARI were taken there.

1 Introduction

1.1 Background

Inter Aide, a French international NGO, has been running a child health program in the central region of Malawi since 1991. Initially the project was focused on providing screening and rehabilitation for malnourished children. However, as the rate of malnutrition has declined it expanded into other health issues affecting children under five years, including the prevention of diarrhea and malaria.

A review of the program completed in mid-2013 found that many of the activities were not well linked with government activities, and in some cases were duplicating government activities. In addition, while the project has made a significant impact on some behaviors such as latrine construction, women have identified barriers to certain health behaviors that can only be addressed by working more closely with the government (e.g. for family planning, safe delivery, access to village clinics etc).

In response to the challenges identified with the current program, Inter Aide has decided to develop a new pilot program that is more closely linked with government services. The program will aim to address barriers to healthy behaviors at both the family and the system level.

The initial pilot program design has been based on a qualitative problem tree analysis by representatives from the community, Health Centre, Traditional Authority and Area Development Committee. The pilot program is summarized in the table below.

Project Title	Reducing morbidity and mortality among children under five years old in the Katchale Health Centre catchment.
Target Area & Beneficiaries	The project will be implemented in all villages within the catchment area of Katchale Health Centre, which is located within Mitundu Health Area in Lilongwe district. The total number of villages identified is currently 97, although this may change after review by the HSAs working at the facility. The total population of the catchment was previously estimated by the Health Centre to be 19,835, including 3,372 children under five years and 4,562 women of reproductive age (15-49 years). However, an accurate population will only be known after initial house-by-house visits early in 2014.
Duration	The project will run for a minimum of three years, from 2014 to 2016. It may be extended if necessary depending on the results from the first three years.
Goal	The goal of the project is to reduce the number of children under five years old, including neonates, who get and/or die from preventable diseases.
Objectives	1. To increase the number of children receiving early diagnosis and/or treatment for common diseases (e.g. LA, ORS, etc). 2. To increase the number of parents implementing prevention behaviours (e.g. ITNs, latrines, hand washing, etc). 3. To reduce the number of complications during pregnancy and birth (e.g. prematurity, infection etc) through increasing antenatal care, safe delivery and family planning.

Partners and stakeholders	• Katchale Health Centre • Mitundu Health Area • Lilongwe District Health Office • Chadza, Kalumbu and Chiseka Traditional Authorities, including the Group Village Headmen and Village Headmen under them • Chadza, Kalumbu and Chiseka Area Development Committees, including the Village Development Committees under them
Approach	The project will be divided into community level activities and system level activities. Community activities will be implemented within each village and will directly involve men, women, children and chiefs. The main aim of these activities will be to improve health related behaviours of parents. System activities will be implemented with the government health staff and will focus on improving the services available at Katchale Health Centre for children under 5 years and pregnant women.

1.2 Purpose

A baseline survey for this pilot program is required for two reasons. The first is to validate the problems identified during the problem tree analysis. The analysis was purely qualitative and so a quantitative survey is required to confirm the real scale of the problems.

The second reason is to allow the results of the program to be measured using a baseline and endline survey in both intervention and control villages. This baseline survey was conducted in January 2014 and the endline survey will be conducted three years later in January 2017.

The purpose of this baseline survey report is to document the methodology and results of the baseline survey. Discussion on how these results impact the design of the pilot program can be found in the Program Document.

2 Methodology

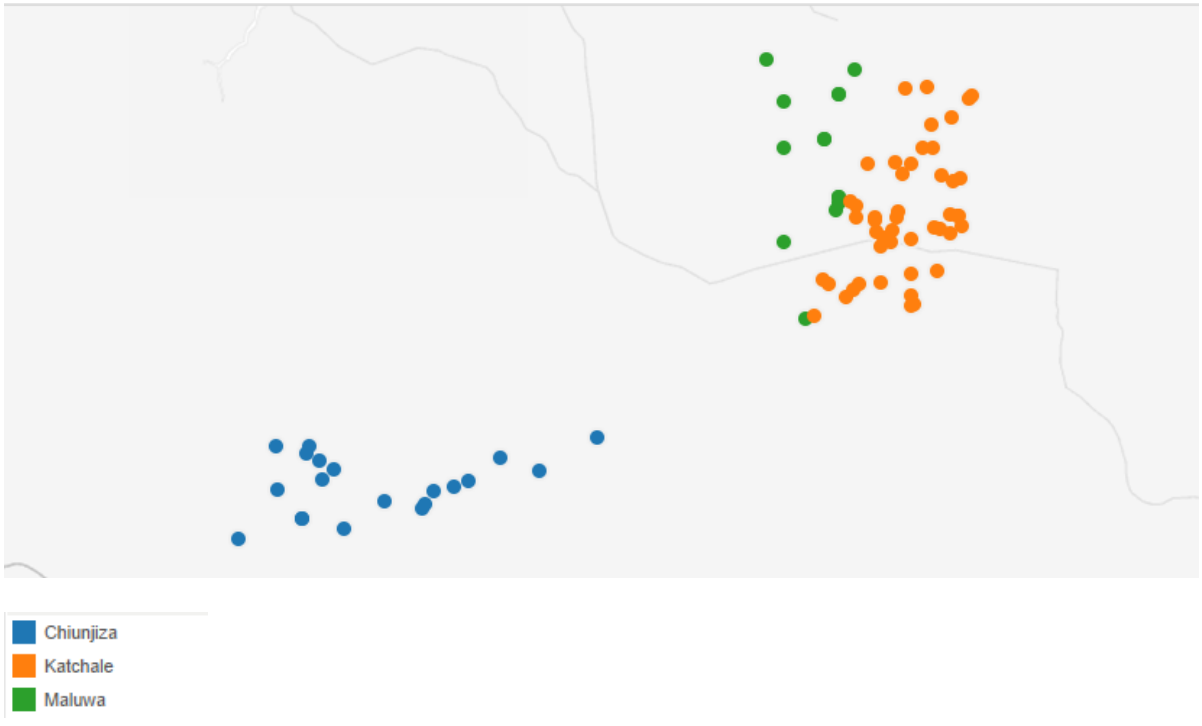
2.1 Design

A quasi-experimental design will be used to measure the results of the pilot program. This means that villages in both the intervention area and a control area need to be surveyed both before and after the program. To ensure the study uses a robust methodology the design was reviewed by Charlotte Mitchell, an independent research specialist based in the UK, before the baseline survey was conducted.

The intervention area is the catchment of Katchale Health Centre, which is managed by Mitundu Health Area. The control areas are the catchments of Maluwa Health Centre and Chiunjiza Health Centre. These two areas were selected as controls because they are as close as possible to Katchale Health Centre in terms of size, remoteness and service level. They area also managed by Mitundu Health Area.

The following map shows the relative locations of the intervention area and control areas. The catchment area for Maluwa Health Centre is adjacent to Katchale, which may allow for spill over of some program effects between nearby villages. Chiunjiza is at least 20km from Katchale and so spill over into that control area is unlikely.

Figure 1 Map showing the relative position of villages in Katchale catchment (intervention area) and Maluwa and Chiunjiza catchments (control areas)



Control villages were selected from two Health Centres because there are several other NGOs working in Mitundu Health Area. Unfortunately there is no central list of all the NGO programs, and their catchment areas change regularly. Selecting control villages from multiple Health Centres will minimise the risk that all control villages are being impacted by the program of another NGO.

2.2 Instrument

The survey questionnaire (**ANNEX A**) was developed and pre-tested by the program team. Many questions were adapted from the 2010 Malawi Demographic Health Survey (MDHS)[1] to align with national statistics. Poverty was measured using the Progress out of Poverty Index (PPI) for Malawi.[2]

An enumerator guide was created to provide additional information to the enumerators on specific questions (**ANNEX B**). The survey took an average of 30 minutes to complete, although this varied from 15 minutes to 1 hour depending on the complexity of the household.

All enumerators were provided with digital cameras and were required to take time and date stamped photos of the respondent, latrine, hand washing facility and bed nets. The identification numbers of the photos were recorded on the survey questionnaire. The purpose of the photographs was to verify that all surveys had taken place, and to ensure the enumerator had physically observed these household items when completing the survey.

The same questionnaire will be used for the endline survey, although sections may be excluded if they are considered no longer relevant. For example, the baseline survey shows that knowledge of key health issues is close to 100% so these questions may not be asked again.

2.3 Sample

Village sampling

Two-stage cluster sampling was used, stratified by HSA station to ensure all HSA catchment areas were represented. In the first stage 48 villages were randomly selected from the intervention area, with six villages from each of the eight HSA stations. In the two control areas 24 villages were randomly selected (48 control villages in total) with 6 villages being taken from each of four HSA stations. The four HSA stations were randomly selected from the total number of stations, but ensuring that at least half of them had a village clinic.

In the intervention area the sampling frame was a list of 97 known villages created by Inter Aide through GPS mapping of the area (additional villages have since been identified after the baseline survey). Seven of the villages that were included in the 2013 catchment (Chilembwe, Chinthu, Choma, Kalumbi, Kapezawanthu, Mdabwi, and Nyamazani) were excluded from the frame before sampling, giving a total of 90 villages in the frame. An accurate population of each village could not be provided by the Health Centre, and so a probability proportional to size sampling method could not be used.

In the control areas the sampling frame was a list of villages provided by HSAs working at Maluwa and Chiunjiza Health Centres. Although population estimates were available, they were considered to be very unreliable and so simple random sampling was used rather than sampling proportional to size.

See **ANNEX G** for the sampling frames in each catchment, and **ANNEX H** for the list of sampled villages.

[1] Ministry of Health. 2010 Malawi Demographic and Health Survey Final Report. Available at: http://www.nsomalawi.mw/index.php/publications/malawi-demographic-and-health-survey.html

2 Progress Out of Poverty Index, Malawi. Available at: http://www.progressoutofpoverty.org/country/malawi

Household sampling

Within each village 10 households were selected using a random walk quota method. This gave a total of 480 households in the intervention areas and 480 in the control areas (240 per control area), with 960 households in total. This is sufficient to detect a difference in proportions of at least 15% at 95% power.[3] A difference of less than 15% on key indicators (e.g. child morbidity, latrine coverage, hand-washing, etc) would be too small to have a meaningful impact for beneficiaries and so it is not necessary to measure at that level. See **ANNEX J** for the sample size calculations used to select the sample size.

To randomly select households in a village the enumerator stood at the house of the chief and spun a stick or pen with one end marked. They walked in the direction of the mark until they reached a house. If there was a woman of reproductive age in the house (15-49 years) who had at least one child under 5 years old, or a child would have been under 5 years old on the day of the survey but died, they proceeded with the survey (if she was willing). If not they stood facing the door of the house and went to the next house on the right. They continued going right until they reached a house with an eligible woman who was willing to complete the survey.

Once a household completed a survey they stood at the door of the house and spun the stick again to choose a new direction. They also span again when they reached the edge of the village or arrived back at a house that has already been visited. See **ANNEX I** for a flow chart describing this sampling process.

This process continued until 10 eligible households had been surveyed from the village. If the village did not have 10 eligible households then the nearest village that had not already been sampled was used to complete the remaining households.

The same villages will be used for the endline survey. The household sampling will be done again in each village, since the households who had children under 5 years during the baseline survey may not have children under 5 years during the endline survey.

2.4 Data Collection

A team of independent consultants was hired to perform data collection (see **ANNEX K** for the call for proposals and **ANNEX L** for the consultant contract). They were responsible for recruiting and supervising five independent enumerators who had experience with health surveys (e.g. nurses, medical students, etc). Inter Aide provided three experienced enumerators, giving a total of eight enumerators. See **ANNEX M** for a list of staff who worked on the baseline survey.

The enumerators received two days of training on the 13th and 14th January 2014. This included a pre-test of the survey in three villages outside the catchment. Data collection took place from the 15th January to the 25th January 2014. The team were able to complete 8-10 villages per day (80-100 questionnaires). One enumerator was dropped in each village in the morning and stayed in that village until they had completed 10 questionnaires.

Each day the enumerators were supervised by the Program Manager and one independent consultant, who moved between the villages throughout the day. See **ANNEX D** for the supervisors guide.

After completing each survey the enumerator gave the survey to their supervisor who reviewed it for completeness. If any information was missing they asked the enumerator to return to the household to

[3] Conroy, R. Sample size: A rough guide. Chapter 1.3 Sample sizes for studies comparing proportions between two groups.

complete it. The supervisors also randomly chose one survey per enumerator per day to audit. The audit involved returning to the household and asking at least 10 questions again to verify that the answers in the survey are correct. See **ANNEX E** for the audit form. The results of the audit showed that the answers were 95% accurate. In some cases the mistake was due to the enumerator, but it other cases is was the respondent who changed their answer.

If possible the same consultants and enumerators will be hired to perform the endline survey for consistency. There is a large seasonal variation in morbidity, so data collection for the endline survey must be performed in January so that it can be compared to the baseline survey.

2.5 Data Entry

Completed surveys were entered into the computer by Inter Aide staff using EpiData. Two forms were created, one for the main part of the questionnaire (called the Household form) and a second one for the child records in Q20 and Q63 (called the Child form)

Once data entry was complete the data sets from both forms were exported from EpiData to a .csv file which was then imported into Excel for cleaning. During the cleaning process the internal consistency of each record was checked, and any inconsistencies were corrected. The following rules were followed:

- If the date of birth (Q20C) and age of child (Q20E) contradicted then the date of birth was used. The correct age was re-calculated using the age table (see **ANNEX C**) and updated in Q20E.
- If the month was not known for a child's date of birth (Q20C) it was assumed to be between Feb and Dec to calculate the age using the age table.
- If the total number of children on Q19 contradicted with the total number of children on Q20 then the number of children on Q20 was used.
- If the owner of the house did not give permission to take a photo of the hanging bed nets then the number of hanging bed nets in Q62 was left blank, even if the owner said that they were present and the enumerator wrote an answer.

After the data entry and cleaning was complete the independent consultants were invited to audit it. This involved randomly selecting 50 questionnaires. For each questionnaire 10 questions were randomly selected from the main part of the questionnaire and three from the child part. The figures in the database were compared to the hard copy questions. The results showed that the data entry was 99.5% accurate.

Finally, the data sets were exported to SPSS and Statistica formats for analysis. Statistica was used to merge the household and child data sets to create a third data set with all variables. SPSS was used for the analysis.

2.6 Analysis

SPSS was used to produce descriptive statistics for all questions (frequency distributions, means, medians, etc) using the separate Household and Child data sets. For clarity, missing data are excluded from the results in this report. Missing data was less than 1% for most questions, and less than 5% for all questions.

SPSS was also used to conduct bivariate analysis, mainly using chi-square test. This analysis looked at the relationship between various risk factors (education, poverty, etc) and outcomes (morbidity, mortality, etc). The combined Household & Child data set was used for most of this analysis. Statistically significant results were those with $p<.05$.

The data were also used to calculate the results for indicators used in the 2010 MDHS. A comparison between the baseline results and MDHS results can be found in the Indicators section of this report.

Mortality rates were calculated using the following definitions:

Neonatal mortality	The probability of dying within the first month of life (0-27 days) per 1000 live births.
Postneonatal mortality	The difference between infant and neonatal mortality.
Infant mortality	The probability of dying before the first birthday per 1000 live births.
Child mortality	The probability of dying between the first and fifth birthdays per 1,000 children surviving to 12 months of age.
Under 5 mortality	Probability of dying between birth and exactly five years of age per 1,000 live births.

A direct method was used to calculate the mortality rates, rather than a synthetic cohort life table.[4] For example, to calculate under 5 mortality only children born between February 2004 and January 2009 were considered, since they would have turned 5 between February 2009 and January 2014. Within this cohort of children those who died before reaching their 5th birthday were identified. The formula Deaths / Live births x 1000 was then used to calculate the under 5 mortality rate.

Poverty was analysed using the Progress out of Poverty Index (PPI). Full instructions for this method can be found on the PPI website.[5] A total PPI score for each household was calculated by adding the answer codes for Q6 to Q15. The poorest households receive a score of 0, while the wealthiest get a score of 100. The PPI lookup table in **ANNEX N** was then used to convert the PPI score into a percentage likelihood that the household is below the national and $1.25 PPP per day poverty lines. This conversion was done for every household. An average of the likelihoods for all households was then calculated to estimate the total percentage of households below both poverty lines.

2.7 Ethics

The purpose of this survey was for quality improvement rather than scientific research, and it had minimal risks. According to the ARECCI Ethics Screening Tool it did not require ethics committee approval.[6]

All participants were required to give informed consent before participating in the survey. This was done with a thumb print on the consent form. The woman completing the survey was able to stop the survey at any time. The hard copy surveys and identifiable data were only shared with members of the survey team.

[4] UN. Mortality estimates from major sample surveys: towards the design of a database for the monitoring of mortality levels and trends. Available at http://www.un.org/en/development/desa/population/publications/pdf/technical/TP2011-2_MortEstMajorSampSurv.pdf

5 Progress Out of Poverty Index, Malawi. Available at: http://www.progressoutofpoverty.org/country/malawi

[6] ARECCI Ethics Screening Tool. Available at: http://www.aihealthsolutions.ca/arecci/misunderstandings.php

2.8 Limitations

There are several limitations to the proposed methodology. The first is that the population of villages was unknown and so sampling could not be done proportional to size. This means that the final sample may have a bias towards households in smaller villages which had a higher chance of being selected than households in larger villages.

The use of a random walk quota sampling method for choosing households within villages also has limitations. There may be a difference between households who are not at home during the time of the survey compared to those that are at home. For example, households who are not at home may be more likely to be lower income, and may not be home because they are doing piecework or working as a tenant in another area.

Finally, only households with children under 5 years old were included. Therefore, the results can only be generalised to households with children under 5 years, not all households.

3 Results

3.1 Sample

In total, 960 households were surveyed. These households had 3430 children, of whom 1341 were under 5 years old at the time of the survey, or would have been under 5 years old if they were alive.

Table 1 Households and children surveyed per catchment area

	Intervention Area (#)	Control Area (#)			
	Katchale	Maluwa	Chiunjiza	Total Control	Total (#)
Households	480	240	240	480	960
Total children	1753	819	858	1677	3430
Under 5 children	679	333	329	662	1341

3.2 Demographics

The age, marital status and education levels of the women surveyed were similar between the intervention and control areas.

Table 2 Age of women surveyed

	Intervention Area (%)	Control Area (%)			
Age group (Q1)	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
<15	0	0	0	0	0
15-19	5	5	8	7	6
20-24	36	42	33	38	37
25-29	22	22	24	23	23
30-34	20	15	16	16	18
35-39	10	8	12	10	10
40-44	4	5	4	4	4
45-49	2	1	2	1	2
50-54	0	0	0	0	0
>55	0	0	0	1	0

Table 3 Marital status of women surveyed

	Intervention Area (%)	Control Area (%)			
Marital status (Q2)	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Single	1	1	1	1	1
Married to monogamous husband	68	67	61	64	66
Married to polygamous husband	27	27	33	30	28
Divorced	4	4	4	4	4
Widowed	0	1	2	1	1

Table 4 Education level of women surveyed

Years of education completed (Q4, Q5)	Intervention Area (%)	Control Area (%)			
	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
0	31	23	36	30	31
1	5	2	5	4	4
2	11	7	9	8	9
3	11	13	9	11	11
4	11	10	8	9	10
5	11	9	8	9	10
6	7	7	7	7	7
7	5	10	8	9	7
8	5	8	6	7	6
9	1	3	1	2	2
10	1	5	1	3	2
11	1	1	0	1	1
12	1	3	0	1	1

Poverty was measured using the PPI for Malawi (see the Methodology section for further details). The following table shows the answers for each question used to calculate the PPI score, as well as the total score.

Table 5 Progress out of Poverty (PPI) questions and total score

	Intervention Area (%)	Control Area (%)			
PPI questions	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q6. How many household members are 14-years-old or younger?					
Five or more (score=0)	13	10	8	9	11
Four (score=4)	19	17	20	19	19
Three (score=6)	26	21	24	23	24
Two (score=12)	21	25	25	25	23
One (score=19)	21	27	22	25	23
None (score=30)	0	0	1	0	0
Q7. How many household members worked their main activity in the past seven days as a farmer (mlimi)?					
Four or more (score=0)	13	8	7	7	10
Three (score=2)	8	7	12	9	9
Two (score=7)	65	73	61	67	66
One (score=8)	13	12	19	15	14
None (score=10)	1	1	2	1	1
Q8. Can the female head read a one-page letter in any language?					
No (score=0)	58	47	57	52	55
Yes (score=5)	42	53	43	48	45
No female head/spouse (score=9)	0	0	0	0	0
Q9. The roof of the main dwelling is predominantly made of what material?					
Grass (score=0)	86	87	86	86	86
Anything besides grass (score=4)	14	13	14	14	14
Q10. What is your main source of cooking fuel?					
Collected firewood from forest reserve, crop residue, sawdust, animal waste, other or none (score=0)	49	48	74	61	55
Collected firewood from unfarmed areas of community (score=1)	11	19	13	16	13
Collected firewood from own woodlot, community woodlot, or other places (score=5)	34	23	12	18	26
Purchased firewood (score=7)	6	9	0	5	5
Paraffin, charcoal, gas, or electricity (score=9)	0	0	1	1	1

	Intervention Area (%)	Control Area (%)			
PPI questions	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q11. What is your main source of lighting fuel?					
Collected firewood, grass, other or none (score=0)	1	6	3	4	3
Paraffin (score=4)	0	0	0	0	0
Purchased firewood, electricity, gas, battery/dry cell (torch), or candles (score=13)	99	94	98	96	98
Q12. Does the household own any lanterns (paraffin)?					
No (score=0)	93	93	95	94	94
Yes (score=5)	7	7	5	6	6
Q13. Does the household own any bicycles, motorcycles / scooters, cars, mini-buses, or lorries?					
No (score=0)	32	30	29	29	31
Yes (score=5)	68	70	71	71	69
Q14. Does the household own any irons (for pressing clothes)?					
No (score=0)	93	93	92	92	92
Yes (score=8)	7	8	8	8	8
Q15. How many sickles does the household own?					
None (score=0)	35	40	35	38	36
One (score=3)	53	49	55	52	52
Two or more (score=7)	12	10	11	11	11
Total PPI score where 0 is most poor and 100 is least poor					
0-9	0	0	0	0	0
10-19	2	2	2	2	2
20-29	16	11	17	14	15
30-39	34	31	33	32	33
40-49	33	36	30	33	33
50-59	12	18	14	16	14
60-69	3	3	3	3	3
70-79	0	0	0	0	0
80-89	0	0	0	0	0
90-100	0	0	0	0	0

The PPI score was used to estimate the percentage of houses below the national and international ($1.25 PPP / day) poverty lines. The results were similar for the intervention and control areas.

Table 6 Percentage of households below the poverty line

	Intervention Area (%)	Control Area (%)			
Poverty line	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Households below national poverty line	43	40	44	42	43
Households below international $1.25 PPP / day poverty line	70	67	70	69	69

The total number of children per family ranged from 1 to 12 children. The average number of children per household was 4 (3 in the control area and 4 in the intervention area). The distribution of family sizes was similar between the intervention and control areas.

Table 7 Number and gender of children

	Intervention Area (%)	Control Area (%)			
	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q19. Total number of children (living or deceased)					
1	19	24	18	21	20
2	18	20	20	20	19
3	16	13	18	15	16
4	16	15	13	14	15
5	13	10	11	10	12
6	6	8	8	8	7
7	5	3	5	4	4
8	4	2	3	3	3
9	2	3	1	2	2
10	0	0	1	0	0
11	0	2	1	1	1
12	0	0	0	0	0
Q20B. Gender of children					
Male	49	53	50	52	50
Female	51	47	50	48	50

3.3 Morbidity & Mortality

3.3.1 Symptom Prevalence

The survey asked whether each child under 5 years old had diarrhea, fever or symptoms of an Acute Respiratory Infection (ARI) in the last two weeks. ARI symtoms were defined as a cough with fast breathing which was chest related. The results were similar between the intervention and control areas.

Table 8 Prevalence of diarrhea, fever and symptoms of an Acute Respiratory Infection (ARI) in children under 5 years old

	Intervention Area (%)	Control Area (%)			
Symptom	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Diarrhea in last 2 weeks (Q63C)	24	17	28	22	23
Fever in last 2 weeks (Q63H)	39	31	39	35	37
Acute respiratory infection symptoms in last 2 weeks*	5	2	2	2	3

* Defined as a cough (Q63I=1) with fast breathing (Q63J=1) that is chest related (Q63K=1 or 3)

3.3.2 Mortality Rates

Neonatal mortality

Neonatal mortality is the probability of dying within the first month of life (0-27 days) per 1000 live births. It was calculated for all live births between January 2009 and December 2013. That is, children who would have already turned 1 month old at the time of the survey. Neonatal mortality was similar in the intervention and control areas.

Table 9 Neonatal mortality for children born between January 2009 and December 2013

	Intervention Area (#)	Control Area (#)			
	Katchale	Maluwa	Chiunjiza	Total Control	Total (#)
Live births	670	326	318	644	1346
Deaths within the first month*	16	6	10	16	32
Neonatal mortality (per 1000 live births)**	24	18	31	25	24

* Defined as Q20F DAYS = 0-27

** Calculated using Deaths / Live births x 1000

Infant mortality

Infant mortality is the probability of dying before the first birthday per 1000 live births. It was calculated for all live births between February 2008 and January 2013. That is, children who would have had their 1st birthday at the time of the survey. Infant mortality was similar in the intervention and control areas.

Table 10 Infant mortality for children born between February 2008 and January 2013

	Intervention Area (#)	Control Area (#)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (#)
Live births	642	309	316	625	1267
Deaths within the first year*	33	16	17	33	66
Infant mortality rate (per 1000 live births)**	51	52	54	53	52

* Defined as Q20F DAYS = 0-27 OR Q20F MONTHS = 1-11

** Calculated using Deaths / Live births x 1000

Under five mortality

Under five mortality is defined as the probability of dying between birth and exactly five years of age per 1,000 live births. It was calculated for all live births between February 2004 and January 2009. That is, children who would have had their 5th birthday at the time of the survey.

Under five mortality was higher in the control area than the intervention area. Since infant mortality is similar in both areas, this means that child mortality (deaths between 1 and 4 years) was higher in the control area.

A review of the cause of death for children aged 1-4 years during the time period showed an increased number of children dying from all causes in the control area relative to the intervention area. However, it is important to remember that the total number of deaths is relatively small (20 in the intervention area compared to 35 in the control area), and so this difference may be due to random variations between areas.

Table 11 Under 5 mortality for children born between February 2004 and January 2009

	Intervention Area (#)	Control Area (#)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (#)
Live births	509	238	253	491	1000
Deaths within the first 5 years*	58	36	39	75	133
Under 5 mortality rate (per 1000 live births)**	114	151	154	153	133

* Defined as Q20F DAYS = 0-27 OR Q20F MONTHS = 1-11 OR Q20F YEARS = 1-4

** Calculated using Deaths / Live births x 1000

3.3.3 Cause of Death

The cause of death was reported from memory by the mother, and is not based on the child's medical records. Therefore, it was not possible to identify a specific cause of death, only the symptoms that were present at the time of death. The cause of death was analysed for all children born between February 2009 and January 2014 who died. That is, children who would have been under 5 years old at the time of the survey.

Neonatal causes accounted for the largest number of deaths in both the intervention and control groups, followed by fever / malaria, then cough / pneumonia and diarrhea. There were a significant number of deaths where the cause was unknown or unclear.

Table 12 Cause of death for 77 children under 5 years who died between February 2009 and January 2014

	Intervention Area (%)	Control Area (%)			
Cause of death (Q20G)	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Fever / malaria	21	31	13	21	21
Diarrhea	5	6	9	8	6
Cough / pneumonia	21	0	13	8	14
Neonatal	34	38	35	36	35
Accident / injury	0	6	0	3	1
Other	8	0	26	15	12
Don't know / unclear	11	19	4	10	10

3.3.4 Miscarriages

Miscarriages were reported separately to child deaths. The percentage of women who had experienced a miscarriage was similar in the intervention and control areas.

Table 13 Miscarriages among women interviewed

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q24. Have you ever had a pregnancy that miscarried, was aborted or ended in a stillbirth?					
Yes	15	14	19	16	16
No	85	86	81	84	84
Don't know	0	0	0	0	0
Q25. When did the last such pregnancy end? (for 151 women who had a miscarriage)					
<2009	54	45	43	44	49
2009	7	9	7	8	8
2010	18	12	9	10	14
2011	6	6	5	5	6
2012	6	15	11	13	10
2013	7	12	25	19	14
2014	1	0	0	0	1

3.3.5 Risk Factors

Bivariate analysis was performed to assess the relationship between various household characteristics and the prevalence of fever and diarrhea in children under 5 years.

The results showed that the prevalence of fever and diarrhea is relatively consistent across different types of households (education level, marital status, poverty level, etc). However, households where the under 5 child slept under a bed net last night were less likely to have a child with a fever in the last two weeks. This result was statistically significant (p<.05).

Households with a latrine and access to a protected water source were slightly less likely to have a child with diarrhea in the last two weeks, although the result was not statistically significant.

Table 14 Household characteristics versus the percentage of children with fever and diarreha in the last two weeks

Household characteristic	Under 5 children with fever in the last 2 weeks (%)	Under 5 children with diarrhea in the last 2 weeks (%)
Marital status		
Monogamous	38	22
Polygamous	38	25
Poverty		
Lowest income households (PPI score 0-29)	29*	23
Middle income households (PPI score 30-59)	46*	36
Highest income households (PPI score 60-100)	39*	23
Mother's education		
No education	22	33
1-4 years school	25	40
5-8 years school	23	40
9-12 years school	25	33
Bed net		
Child slept under a bed net last night	35*	23
Child did not sleep under a bed net last night	43*	24
Water		
Use a protected water source (borehole, protected well)	36	22
Use an unprotected water source (unprotected well, surface water)	43	26
Sanitation		
Household has a latrine	37	22
Household does not have a latrine	38	27
Hygiene		
Household has a hand washing facility	40	28
Household does not have a hand washing facility	37	23

* Difference is statistically significant, p<.05

Analysis was also conducted to assess the relationship between household characteristics and whether or not the household had a child who had died. Polygamous households, poorer households, households where the mother had less education, and households without a latrine were significantly more likely to have had a child that died (p<.05).

Table 15 Household characteristics versus the percentage of household that had a child who died

Household characteristic	(Q18) Households who had a child that was born alive but later died (%)
Marital status	
Monogamous	28*
Polygamous	39*
Poverty	
Lowest income households (PPI score 0-29)	56*
Middle income households (PPI score 30-59)	27*
Highest income households (PPI score 60-100)	15*
Mother's education	
No education	44*
1-4 years school	33*
5-8 years school	21*
9-12 years school	6*
Bed net	
Child slept under a bed net last night	30
Child did not sleep under a bed net last night	33
Water	
Use a protected water source (borehole, protected well)	32
Use an unprotected water source (unprotected well, surface water)	29
Sanitation	
Household has a latrine	30*
Household does not have a latrine	36*
Hygiene	
Household has a hand washing facility	38
Household does not have a hand washing facility	31

* Difference is statistically significant, p<.05

3.4 Antenatal, Delivery & Postnatal

All questions related to antenatal care, delivery and postnatal care were related to the birth of the most recent (youngest) child.

3.4.1 Antenatal care

Attendance at antenatal care was very high in both the intervention and control areas. The majority of women only started antenatal visits in the second trimester. Most were seen by the nurse / midwife at the health centre.

Table 16 Attendance at antenatal care

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q26. Did you see anyone for antenatal care for this pregnancy?					
Yes	98	98	99	98	98
No	2	2	1	2	2
Don't know	0	0	0	0	0
Q29. How many months pregnant were you when you first received antenatal care for this pregnancy? (for 943 women who attended antenatal care)					
1	0	1	0	1	0
2	3	2	3	2	3
3	9	9	12	11	10
4	25	27	35	31	28
5	31	30	28	29	30
6	23	24	16	20	22
7	7	6	4	5	6
8	1	0	1	1	1
9	0	0	0	0	0
Q30. How many times did you receive antenatal care during this pregnancy? (for 943 women who attended antenatal care)					
1	2	0	2	1	2
2	7	9	8	8	8
3	32	36	25	31	31
4	35	32	38	35	35
5	13	15	19	17	15
6	8	4	6	5	7
7	2	3	2	2	2
8	1	0	0	0	1

Question	Intervention Area (%)	Control Area (%)			Total (%)
	Katchale	Maluwa	Chiunjiza	Total Control	
Q27. Whom did you see? (for 943 women who attended antenatal care)					
Doctor / Clinical Officer / Medical Assistant	2	10	9	10	6
Nurse / Midwife	97	94	92	93	95
Patient Attendant	1	0	0	0	1
HSA	1	0	0	0	0
Traditional Birth Attendant	0	0	0	0	0
Other	0	0	0	0	0
Q28. Where did you receive antenatal care for this pregnancy? (for 943 women who attended antenatal care)					
Home					
Your home	0	0	1	0	0
Other home (including TBA home)	0	0	0	0	0
Public Sector					
Govt Hospital	3	19	14	17	10
Govt Health Centre	95	81	82	81	88
Mobile Clinic	0	0	0	0	0
Other public	0	0	0	0	0
CHAM / Mission					
Hospital	0	0	1	1	0
Health Centre	0	0	0	0	0
Private Medical Sector					
Private Hospital / Clinic / Doctor	0	0	1	0	0
Other private medical	0	0	0	0	0
BLM	0	0	0	0	0
Other	0	0	0	0	0

3.4.2 Delivery

Women were asked about the size of their most recent child at birth. This can be used as an estimate of the number of low birth weight babies. The results were similar in the control and intervention areas.

Table 17 Birth size

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q31. When (NAME) was born, was he/she very large, larger than average, average, smaller than average, or very small?					
Very large	6	5	8	6	6
Larger than average	21	19	22	21	21
Average	64	69	62	65	64
Smaller than average	6	5	7	6	6
Very small	3	2	2	2	2
Don't know	0	1	0	0	0

Questions regarding safe delivery were also included in the survey, such as who assisted with the delivery and where it took place. The majority of births took place at a health centre and were assisted by a nurse / midwife. Most of the women who delivered at a health facility found the services good, although they rated the services at Chiunjiza higher than those at Maluwa or Katchale.

Table 18 Safe delivery practices

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q32. Who assisted with the delivery of (NAME)?					
Doctor / Clinical Officer / Medical Assistant	4	8	10	9	7
Nurse / Midwife	78	78	78	78	78
Patient Attendant	2	1	3	2	2
Traditional Birth Attendant	10	8	8	8	9
Relative/friend	5	5	4	5	5
Other	0	0	0	0	0
No one	1	4	0	2	2

Question	Intervention Area (%)	Control Area (%)			Total (%)
	Katchale	Maluwa	Chiunjiza	Total Control	
Q33. Where did you give birth to (NAME)?					
Home					
Your home	5	5	4	5	5
Other home (including TBA home)	11	8	8	8	10
Public Sector					
Govt Hospital	15	34	20	27	21
Govt Health Centre	67	50	67	58	63
Other public	0	0	0	0	0
CHAM / Mission					
Hospital	0	1	1	1	1
Health Centre	0	0	0	0	0
Private Medical Sector					
Private Hospital / Clinic	0	0	0	0	0
Other private medical	0	0	0	0	0
BLM	0	0	0	0	0
Other	1	3	0	1	1
Q35. Overall, how would you rate the quality of the maternity services you received at the health facility? (for 810 women who gave birth at a health facility)					
Poor	5	9	2	6	5
Average	19	13	11	12	15
Good	76	78	86	82	79

Women who delivered at home or a TBA were asked why they decided not to go to a health facility. The main reasons were the long distance and that the birth happened unexpectedly.

Table 19 Reasons for not delivering at a health facility

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q34. Why did you decide not to go to a health facility to give birth? (for 136 women who gave birth at home or at a TBA)					
Husband would not give permission to go	1	0	0	0	1
Not enough money	4	3	0	2	3
Long distance to the health facility	35	40	29	34	35
Lack of transport / no money for transport	21	20	14	17	19
Not wanting to go alone	4	13	0	7	5
Concern that there may not be a female health provider	0	0	0	0	0
Concern that there may not be any health provider	6	7	11	9	7
Concern that there may be no drugs available	0	0	4	2	1
Concern that there may inadequate equipment or supplies	1	0	0	0	1
Unhappy with quality of services	1	0	0	0	1
Prefer traditional methods	12	7	7	7	10
Birth happened unexpectedly	33	37	46	41	37
Other	12	13	7	10	11

3.4.3 Postnatal care

Women were asked if any healthcare provider checked on their health after the birth. More women remembered receiving a postnatal check in the control area compared to the intervention area. The majority of postnatal checks occurred within 1 hour of the birth.

Table 20 Postnatal checks

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q36. After (NAME) was born, did any health care provider or a traditional birth attendant check on your health?					
Yes	67	80	80	80	73
No	33	19	20	19	26
Don't know	0	1	0	1	1
Q37. How long after delivery did the first check take place? (for 193 women who received a check)					
Within 1 hour	84	73	79	76	80
2-8 hours	7	19	12	16	12
1-7 days	7	4	6	5	6
1-6 weeks	2	5	2	3	3
Q38. Who checked on your health at that time? (for 193 women who received a check)					
Doctor / Clinical Officer / Medical Assistant	6	7	7	7	7
Nurse / Midwife	85	90	88	89	87
Patient Attendant	2	0	3	2	2
Traditional Birth Attendant	7	3	2	2	5
Relative/friend	0	0	0	0	0
Other	1	0	0	0	0

3.5 Family Planning

3.5.1 Desire for more children

Questions related to family planning showed that the majority of women do not want another child soon, and most couples make joint decisions on family planning. This was similar in the intervention and control areas.

Table 21 Desire to have more children and family planning decision making

	Intervention Area (%)	Control Area (%)			
	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q39. Do you want to have another child now, do you want to wait until later, or do you not want any more children at all?					
Want a child now	13	15	13	14	13
Want to wait until later	66	66	69	68	67
Do not want any more children	21	19	18	18	20
Q41. Are decisions related to contraception mainly your decision, mainly your husband's decision, or do you both decide together?					
Mainly respondent	13	13	11	12	12
Mainly husband	6	1	3	2	4
Joint decision by couple	80	85	87	86	83
Other	1	2	0	1	1

3.5.2 Current pregnancies

Women were asked if they are currently pregnant, and whether the pregnancy was planned (she wanted a child then) or unplanned (she wanted to wait until later or did not want another child). In the intervention area more than half of the pregnancies were unplanned, while in the control area it was less than half.

Table 22 Current pregnancies

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q21. Are you pregnant now?					
Yes	9	10	9	10	9
No	91	90	91	90	91
Don't know	0	0	0	0	0
Q23. At the time you became pregnant, did you want a child then? (for 90 currently pregnant women)					
Wanted a child then	34	54	52	53	44
Wanted to wait until later	55	42	29	36	45
Did not want any more children	11	4	19	11	11

Question	Intervention Area (%)	Control Area (%)			Total (%)
	Katchale	Maluwa	Chiunjiza	Total Control	
Q22. How many months pregnant are you? (for 90 currently pregnant women)					
1	0	0	5	2	1
2	5	8	0	4	4
3	7	12	14	13	10
4	16	12	10	11	13
5	14	28	14	22	18
6	14	16	14	15	15
7	14	8	29	17	16
8	19	8	5	7	12
9	12	8	10	9	10

3.5.3 Awareness of family planning methods

Awareness of family planning methods was measured by asking women if they had heard of each method. The majority of women had heard about most of the methods, except for male sterilisation, the rhythm method, withdrawal and emergency contraception. A small number of women mentioned other traditional methods, including tying a string around the waist and drinking herbs.

Table 23 Awareness of family planning methods

Q40. Have you ever heard of (METHOD)	Intervention Area (%)	Control Area (%)			Total (%)
	Katchale	Maluwa	Chiunjiza	Total Control	
Female sterilization	89	95	90	92	91
Male sterilization	57	67	65	66	61
Pill	96	97	94	96	96
IUD	93	95	95	95	94
Injectables	99	100	98	99	99
Implants	97	94	96	95	96
Male condom	93	95	94	95	94
Female condom	91	94	91	93	92
Rhythm or periodic abstinence	52	61	55	58	55
Withdrawal	47	45	50	48	47
Emergency contraception	31	34	33	34	32
Other	12	15	12	14	13

3.5.4 Use of family planning methods

More than half of all women are using family planning methods, with injectables being the most popular method. Most women are accessing these methods through the health centre, and have only started recently (in the last 12 months). Almost all the women had told their husbands that they were using a method.

When interpreting these results it is important to remember that only households with children under 5 years were sampled. Women who have successfully used contraception for more than 5 years would not have been included in the sample, as they would not have a child under 5 years.

Table 24 Use of family planning methods among mothers of children under 5 years

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q42. Are you currently doing something or using any method to delay or avoid getting pregnant?					
Yes	63	60	55	58	60
No	37	40	44	42	40
Q43. Which method are you using? (for 578 women currently using a method)					
Female sterilization	8	8	5	7	7
Male sterilization	0	0	0	0	0
Pill	4	2	3	3	3
IUD	1	1	2	1	1
Injectables	73	77	74	75	74
Implants	12	8	14	11	11
Male condom	1	0	1	0	1
Female condom	0	1	1	1	1
Rhythm or periodic abstinence	0	1	0	0	0
Withdrawal	0	0	0	0	0
Emergency contraception	0	0	0	0	0
Other	1	2	0	1	1
Q44. Since when have you been using (CURRENT METHOD) without stopping? (for 578 women currently using a method)					
Before 2009	1	0	1	0	0
2009	2	3	2	2	2
2010	6	3	6	5	5
2011	14	13	8	11	13
2012	17	18	21	20	18
2013	57	59	60	59	58
2014	2	3	3	3	2

Question	Intervention Area (%)	Control Area (%)			Total (%)
	Katchale	Maluwa	Chiunjiza	Total Control	
Q45. Where did you obtain (CURRENT METHOD) when you started using it? (for 578 women currently using a method)					
Public Sector					
Govt Hospital	2	7	3	5	3
Govt Health Centre	79	68	79	73	76
Govt Health Post / Outreach	1	0	6	3	2
Mobile Clinic	4	15	5	10	7
HSA	0	2	3	3	1
CBDA/Door to Door	0	1	1	0	0
Other public	0	0	0	0	0
CHAM/Mission					
Hospital	0	0	0	0	0
Health Centre	0	0	0	0	0
Mobile Clinic	0	0	0	0	0
Door to Door	0	0	0	0	0
Private Medical Sector					
Private Hospital / Clinic / Doc.	0	1	1	1	1
Pharmacy	0	0	0	0	0
Mobile Clinic	0	1	1	1	0
CBDA/Door to Door	0	0	0	0	0
Other private medical	0	0	0	0	0
BLM	13	4	2	3	8
MACRO	0	0	0	0	0
Youth Drop In Centre	0	0	0	0	0
Other Source					
Shop	0	0	0	0	0
Church	0	0	0	0	0
Friend / Relative	0	1	0	0	0
Other	1	1	0	1	1
Q46. Does your husband know that you are using a method of family planning? (for 578 women currently using a method)					
Yes	98	99	98	99	98
No	2	1	2	1	2
Don't know	0	0	0	0	0

3.5.5 Non-use of family planning methods

Most women who were not using a method of family planning were aware that they could get one at the Health Centre. The most common reasons given by women who were not using a family planning were that they were not having sex (e.g. because their husband was temporarily away), they were breastfeeding, or they had a baby recently.

Table 25 Awareness of family planning sources among women not using a family planning method

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q47. Do you know a place where you can obtain a method of family planning? (for 380 women not currently using a method)					
Yes	94	99	95	97	96
No	6	1	5	3	4
Q48. Where is that? (for 380 women not currently using a method)					
Public Sector					
Govt Hospital	14	24	19	21	18
Govt Health Centre	94	96	90	93	93
Govt Health Post / Outreach	1	1	5	3	2
Mobile Clinic	2	8	2	5	4
HSA	0	3	8	6	3
CBDA/Door to Door	0	0	0	0	0
Other public	0	0	0	0	0
CHAM/Mission					
Hospital	0	2	2	2	1
Health Centre	0	0	0	0	0
Mobile Clinic	0	0	0	0	0
Door to Door	0	0	0	0	0
Private Medical Sector					
Private Hospital / Clinic / Doc.	6	0	0	0	3
Pharmacy	0	0	0	0	0
Mobile Clinic	1	0	0	0	0
CBDA/Door to Door	0	0	0	0	0
Other private medical	0	0	0	0	0
BLM	1	0	0	0	1
MACRO	0	0	0	0	0
Youth Drop In Centre	0	0	0	0	0
Other Source					
Shop	0	0	0	0	0
Church	0	0	0	0	0
Friend / Relative	0	0	0	0	0
Other	0	0	0	0	0

Table 26 Reasons for not using a family planning method

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q49. Can you tell me why you are not using a method?					
Want another child now	19	19	18	18	19
Not married	4	4	4	4	4
Fertility-related reasons					
Not having sex	23	26	25	25	24
Infrequent sex	2	0	3	1	2
Menopausal/ hysterectomy	1	0	4	2	1
Infertile/ low fertility	2	1	0	0	1
Had a baby recently	23	19	24	21	22
Breastfeeding	9	16	9	12	11
Should be left to fate	1	1	1	1	1
Opposition to use					
Respondent opposed	0	0	0	0	0
Husband opposed	2	2	0	1	1
Others opposed	1	0	0	0	0
Religious prohibition	0	0	0	0	0
Lack of knowledge					
Knows no method	1	0	0	0	0
Knows no source	2	0	0	0	1
Method-related reasons					
Health concerns	0	0	2	1	1
Fear of side effects	4	2	3	2	3
Lack of access/too far	3	0	1	0	2
Costs too much	0	0	0	0	0
Inconvenient to use	1	1	1	1	1
Interferes with body's normal processes	4	2	2	2	3
Other (including pregnant now)	22	26	20	23	22
Don't know	0	0	0	0	0

3.6 Hygiene & Sanitation

3.6.1 Water

Most households have access to a borehole for collecting drinking water, although access was lower in the control area compared to the intervention area.

Table 27 Drinking water sources

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q50. What is the main source of drinking water for members of your household?					
Piped into dwelling	0	0	0	0	0
Piped into yard/plot	0	0	0	0	0
Public tap/standpipe	0	0	0	0	0
Tube well or borehole	83	80	58	69	76
Protected well	6	1	1	1	3
Unprotected or semi-protected well	11	13	34	23	17
Protected spring	0	0	0	0	0
Unprotected spring	0	6	1	3	2
Rainwater	0	0	0	0	0
Tanker truck	0	0	0	0	0
Cart with small tank	0	0	0	0	0
Surface water (river / dam / lake / pond / stream / canal / irrigation water)	0	0	5	3	1
Bottled water	0	0	0	0	0
Other	0	0	0	0	0

Just over half of all households do something to their water to make it safe. Of those households that do something, around half add chlorine, with the remainder only letting it settle or covering it with a lid.

Table 28 Water treatment

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q51. Do you do anything to the water to make it safe for drinking?					
Yes	48	46	33	39	43
No	52	54	67	61	56
Don't know	0	0	0	0	0

Question	Intervention Area (%)	Control Area (%)			Total (%)
	Katchale	Maluwa	Chiunjiza	Total Control	
Q52. What do you usually do to make the water safe to drink? (for 417 households that do something to make it safe)					
Boil	7	9	13	11	9
Add bleach / chlorine / water guard	61	34	50	40	52
Strain through a cloth	0	1	3	2	1
Use water filter (ceramic / sand / composite / etc)	1	0	1	1	1
Solar disinfection	0	0	0	0	0
Let it stand and settle	17	17	10	14	16
Other (includes cover with a lid)	22	53	28	43	31
Don't know	0	2	0	1	0

3.6.2 Sanitation

Most households reported that they have a pit latrine. However, almost half of the pit latrines are shared. Shared latrines are often used as a way for respondents to avoid admitting to open defection. Therefore, only households with unshared latrines can be considered to have proper sanitation facilities.

Table 29 Household sanitation facilities

Question	Intervention Area (%)	Control Area (%)			Total (%)
	Katchale	Maluwa	Chiunjiza	Total Control	
Q53. What kind of toilet facility do members of your household use?					
Flush toilet	0	0	0	0	0
Ventilated improved pit latrine	0	0	0	0	0
Pit latrine with concrete slab	6	0	5	3	4
Pit latrine without concrete slab/open pit	72	73	46	59	66
Composting toilet	0	0	0	0	0
Bucket toilet	0	0	0	0	0
Hanging toilet/hanging latrine	0	0	0	0	0
No facility/bush/field	22	27	48	37	29
Other	0	0	0	0	0

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q54. Check if the toilet has a cover (for 676 households with a toilet facility)					
Cover is present and on	25	30	27	29	27
Cover is present but not on	33	32	31	32	33
No cover	42	39	41	40	41
No permission to see	0	0	0	0	0
Q55. Do you share this toilet facility with other households? (for 676 households with a toilet facility)					
Yes	45	39	46	42	44
No	55	61	54	58	56

3.6.3 Hand washing

Almost no households had a hand washing facility. Due to the small number of households with a facility it was not possible to compare the percentage with water / soap between intervention and control areas.

Table 30 Hand washing facilities

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q56. Please show me where members of your household most often wash their hands (after the latrine or at any other time)					
Observed a hand washing facility at the location identified by the respondent	3	0	0	0	2
Did not observe a hand washing facility, but did observe other hand washing items at the location identified by the respondent (basin, water container, soap, ash, etc)	3	0	0	0	2
Did not observe a hand washing facility or any other hand washing items	89	98	97	97	93
No permission to see	5	2	3	2	4

Question	Intervention Area (%)	Control Area (%)			Total (%)
	Katchale	Maluwa	Chiunjiza	Total Control	
57. Check availability of water at the location identified for hand washing (for 32 households with a hand washing facility or items)					
Water is available	n/a	n/a	n/a	n/a	75
Water is not available	n/a	n/a	n/a	n/a	22
No permission to see	n/a	n/a	n/a	n/a	3
58. Check availability of soap at the location identified for hand washing (for 32 households with a hand washing facility or items)					
Soap or detergent (bar, liquid, powder or paste)	n/a	n/a	n/a	n/a	50
Ash, mud or sand	n/a	n/a	n/a	n/a	3
None	n/a	n/a	n/a	n/a	44
No permission to see	n/a	n/a	n/a	n/a	0

3.7 Bed Nets

Most households own a bed net, although not all the bed nets were hanging when inspected by the enumerators. Bed net coverage is slightly higher in the control area compared to the intervention area. This translates into a higher proportion of children under 5 sleeping under a net in the control area.

Table 31 Bed net ownership and use

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q59. How many rooms in this household are used for sleeping? (including the living room if used for sleeping)					
1	49	45	64	55	52
2	40	42	22	32	36
3	9	11	10	10	10
>3	2	2	4	3	3
Q60. Does your household have any mosquito nets that can be used while sleeping?					
Yes	76	86	82	84	80
No	24	14	18	16	20
Don't know	0	0	0	0	0
Q61. How many mosquito nets does your household have? (for 768 households that own a mosquito net)					
1	58	44	45	44	51
2	32	38	33	36	34
3	9	12	15	14	11
>3	2	5	7	6	4
Q62. Check how many mosquito nets are currently hanging inside the house, ready for sleeping tonight. (for 768 households that own a mosquito net)					
0	22	10	20	15	18
1	65	76	68	72	69
2	5	6	9	7	6
3	0	1	0	0	0
>3	0	0	1	0	0
No permission to observe net	7	7	3	5	6
Bed net status for all households (Combining Q60, Q61 and Q62)					
No net	24	14	18	16	20
Have net but it is not hanged	17	9	19	14	15
Have hanging net	54	71	60	66	60
No permission to observe net	5	6	3	4	5

Question	Intervention Area (%)	Control Area (%)			Total (%)
	Katchale	Maluwa	Chiunjiza	Total Control	
Q63B. Did (NAME OF UNDER 5 CHILD) sleep under a mosquito net last night? (for 1264 children under 5 years who are still alive)					
Yes	61	78	69	74	67
No	39	22	31	26	33
Don't know	0	0	0	0	0

3.8 Health Seeking Behaviour & Treatment

The survey asked about the recent health of each child under 5 years old. This included 1264 children born between February 2009 and January 2014 who were still alive. If a child had been sick with diarrhea, fever or ARI symptoms in the last 2 weeks then follow up questions were asked to determine if they had been taken for treatment.

3.8.1 Diarrhea

Most children with diarrhea were taken to the health centre for treatment 1-2 days after the symptoms started. However, some were not taken for treatment at all. Of those that were taken to a health facility, the majority received ORS.

Table 32 Health seeking and treatment for children under 5 with diarrhea

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q63C. Has (NAME) had diarrhea in the past 2 weeks?					
Yes	24	17	28	22	23
No	76	83	72	78	77
Don't know	0	0	0	0	0
Q63D. Did you seek advice or treatment for the diarrhea from any source? (for 289 children who had diarrhoea in the past 2 weeks)					
Yes	74	79	74	76	75
No	26	21	26	24	25
Q63E. Where did you seek advice or treatment? (for 216 children who had treatment sought)					
Public Sector					
Govt Hospital	2	5	8	7	4
Govt Health Centre	85	80	69	74	80
Govt Health Post	0	0	3	2	1
Mobile Clinic	0	0	3	2	1
Village Clinic	4	7	5	6	5
HSA	2	2	0	1	1
Other public	0	0	0	0	0
CHAM/Mission					
Hospital	0	2	5	4	2
Health Centre	0	0	0	0	0
Private Medical Sector					
Private Hospital / Clinic / Doctor	1	0	0	0	0
Pharmacy	0	0	0	0	0
Mobile Clinic	0	0	0	0	0
Private HSA	0	0	0	0	0

Question	Intervention Area (%)	Control Area (%)			
	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Other private	0	0	0	0	0
BLM	0	0	0	0	0
MACRO	0	0	0	0	0
Youth Centre	0	0	0	0	0
Other source					
Shop	7	5	8	7	7
Traditional	0	0	0	0	0
Other	2	0	2	1	1
Q63F. How many days after the diarrhea began did you first seek advice or treatment for (NAME)? (for 216 children who had treatment sought)					
0 (same day)	14	10	6	8	11
1	34	49	44	46	39
2	33	20	29	25	29
3	13	17	15	16	14
4	3	2	5	4	3
5	1	0	2	1	1
>5	3	2	0	1	2
Q63G. Was he/she given a fluid made from a special packet called THANZI or ORS? (for 216 children who had treatment sought)					
Yes	69	95	79	85	77
No	31	5	21	15	23
Don't know	0	0	0	0	0

3.8.2 Fever

As with diarrhea, the majority of children with fever were taken to a health facility after 1-2 days. However, some were not taken for treatment at all. Of those that were taken to a health facility, most received either antimalarials or antibiotics and painkillers.

Table 33 Health seeking and treatment for children under 5 with fever

Question	Intervention Area (%)	Control Area (%)			
	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q63H. Has (NAME) been ill with a fever at any time in the last 2 weeks?					
Yes	39	31	39	35	37
No	61	68	61	64	63
Don't know	0	0	0	0	0

Question	Intervention Area (%)	Control Area (%)			
	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q63L. Did you seek advice or treatment for the illness from any source? (for 464 children who had a fever in the last 2 weeks)					
Yes	75	86	78	82	78
No	25	14	22	18	22
Q63M. Where did you seek advice or treatment? (for 360 children for whom treatment was sought)					
Public Sector					
Govt Hospital	2	10	6	8	5
Govt Health Centre	82	63	66	65	73
Govt Health Post	1	0	1	1	1
Mobile Clinic	1	1	2	2	1
Village Clinic	4	5	4	5	4
HSA	1	0	0	0	1
Other public	0	0	0	0	0
CHAM/Mission					
Hospital	1	4	3	3	2
Health Centre	0	0	0	0	0
Private Medical Sector					
Private Hospital / Clinic / Doctor	3	1	1	1	2
Pharmacy	0	0	0	0	0
Mobile Clinic	0	0	0	0	0
Private HSA	0	0	0	0	0
Other private	0	0	0	0	0
BLM	0	0	0	0	0
MACRO	0	0	0	0	0
Youth Centre	0	0	0	0	0
Other source					
Shop	14	22	19	21	17
Traditional	1	0	0	0	0
Other	1	0	1	1	1

Question	Intervention Area (%)	Control Area (%)			
	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q63N. How many days after the illness began did you first seek advice or treatment for (NAME)? (for 360 children for whom treatment was sought)					
0 (same day)	13	11	9	10	11
1	41	44	33	38	39
2	28	28	39	34	31
3	11	11	13	12	12
4	4	4	2	3	3
5	1	0	2	1	1
>5	3	2	2	2	3
Q63O. At any time during the illness did (NAME) take any drugs for the illness? (for 360 children for whom treatment was sought)					
Yes	94	100	95	97	96
No	6	0	5	3	4
Q63P. What drugs did (NAME) take? (for 342 children who received drugs)					
Antimalarials					
LA	65	62	56	59	62
Other antimalarial	1	5	3	4	3
Antibiotics					
Pills/syrup	34	28	42	35	35
Injection	4	4	0	2	3
Other drugs					
Painkillers (aspirin, Panadol, ibuprofen, etc)	78	68	69	68	73
Other	3	1	9	5	4
Don't know	1	0	1	1	1

3.8.3 Acute Respiratory Infection

Only a small number of children had ARI symptoms in the last two weeks, and most were taken to a health centre or hospital for treatment.

Table 34 Health seeking and treatment for children under 5 with Acute Respiratory Infection

Question	Intervention Area (%)	Control Area (%)			
	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q63I. Has (NAME) had an illness with a cough at any time in the last 2 weeks?					
Yes	31	24	36	30	30
No	69	76	64	70	70
Don't know	0	0	0	0	0

Question	Intervention Area (%)	Control Area (%)			Total (%)
	Katchale	Maluwa	Chiunjiza	Total Control	
Q63J. When (NAME) had an illness with a cough, did he/she breath faster than usual with short, rapid breaths or have difficulty breathing? (for 376 children who had a cough in the past 2 weeks)					
Yes	21	10	12	11	16
No	79	90	88	89	84
Don't know	0	0	0	0	0
Q63K. Was the fast or difficult breathing due to a problem in the chest or to a blocked or runny nose? (for 59 children who had a cough and fast breathing in the last 2 weeks)					
Chest only	51	71	25	42	48
Nose only	13	14	33	26	17
Both	28	14	33	26	28
Other	0	0	0	0	0
Don't know	8	0	8	5	7
Q63L. Did you seek advice or treatment for the illness from any source? (for 44 children who had a cough and fast breathing in the chest in the last 2 weeks)					
Yes	77	100	100	100	84
No	23	0	0	0	16
Q63M. Where did you seek advice or treatment? (for 37 children for whom treatment was sought)					
Public Sector					
Govt Hospital	8	17	0	8	8
Govt Health Centre	88	83	57	69	81
Govt Health Post	0	0	0	0	0
Mobile Clinic	0	0	0	0	0
Village Clinic	0	0	0	0	0
HSA	0	0	0	0	0
Other public	0	0	0	0	0
CHAM/Mission					
Hospital	0	17	14	15	5
Health Centre	0	0	0	0	0
Private Medical Sector					
Private Hospital / Clinic / Doctor	0	0	0	0	0
Pharmacy	0	0	0	0	0
Mobile Clinic	0	0	0	0	0
Private HSA	0	0	0	0	0
Other private	0	0	0	0	0
BLM	0	0	0	0	0

Question	Intervention Area (%)	Control Area (%)			Total (%)
	Katchale	Maluwa	Chiunjiza	Total Control	
MACRO	0	0	0	0	0
Youth Centre	0	0	0	0	0
Other source					
Shop	8	0	14	8	8
Traditional	0	0	0	0	0
Other	0	0	0	0	0
Q63N. How many days after the illness began did you first seek advice or treatment for (NAME)? (for 37 children for whom treatment was sought)					
0 (same day)	13	17	29	23	8
1	25	67	57	62	24
2	25	17	14	15	38
3	21	0	0	0	19
4	8	0	0	0	5
5	0	0	0	0	0
>5	8	0	0	0	6
Q63O. At any time during the illness did (NAME) take any drugs for the illness? (for 37 children for whom treatment was sought)					
Yes	92	100	100	100	95
No	8	0	0	0	5
Q63P. What drugs did (NAME) take? (for 35 children for who received drugs)					
Antimalarials					
LA	41	50	14	31	37
Other antimalarial	0	0	0	0	0
Antibiotics					
Pills/syrup	73	83	0	92	80
Injection	5	0	0	0	3
Other drugs					
Painkillers (aspirin, Panadol, ibuprofen, etc)	77	33	57	46	66
Other	5	0	0	0	3
Don't know	0	0	0	0	0

3.9 Awareness

Awareness of key health messages was assessed by asking the respondent if they had ever heard a particular message, and where they heard it. Awareness of all messages was nearly universal, and most women had heard the message from a health worker. This is not surprising, as almost all women had attended antenatal care, where these messages are reinforced. They are also reinforced at mobile clinics and village clinics.

Table 35 Awareness of a key message on bed nets

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q64A. Have you ever heard that sleeping under a mosquito net can prevent malaria?					
Yes	99	100	99	100	99
No	1	0	1	0	1
Q64B. Where did you hear this? (for 954 women who have heard it)					
Health worker	99	100	100	100	99
Radio	5	4	4	4	5
Television	0	0	0	0	0
Newspaper	0	0	0	0	0
Friend/neighbour	9	3	3	3	6
Family member	2	1	0	0	1
NGO worker	2	0	1	0	1
Chief	0	0	0	0	0
Other	0	2	1	2	1

Table 36 Awareness of a key message on sanitation

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q65A. Have you ever heard that using a toilet can prevent diarrhoea?					
Yes	98	100	100	100	99
No	2	0	0	0	1
Q65B. Where did you hear this? (for 947 women who have heard it)					
Health worker	99	100	99	99	99
Radio	5	3	4	4	4
Television	0	0	0	0	0
Newspaper	0	0	0	0	0
Friend/neighbour	8	3	4	4	6
Family member	1	1	0	1	1
NGO worker	2	0	0	0	1
Chief	0	0	1	0	0
Other	1	2	1	1	1

Table 37 Awareness of a key message on hand washing

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q66A. Have you ever heard that washing your hands can prevent diarrhoea?					
Yes	99	99	99	99	99
No	1	1	0	1	1
Q66B. Where did you hear this? (for 949 women who have heard it)					
Health worker	99	99	100	99	99
Radio	5	3	4	4	4
Television	0	0	0	0	0
Newspaper	0	0	0	0	0
Friend/neighbour	6	3	3	3	5
Family member	2	0	0	0	1
NGO worker	2	0	0	0	1
Chief	0	0	0	0	0
Other	0	3	1	2	1

Table 38 Awareness of a key message on health seeking

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q67A. Have you ever heard that when your child under 5 years old is sick you should take them to a health centre or village clinic immediately for treatment?					
Yes	99	99	100	99	99
No	1	1	0	1	1
Q67B. Where did you hear this? (for 949 women who have heard it)					
Health worker	99	99	100	99	99
Radio	5	3	4	4	4
Television	0	0	0	0	0
Newspaper	0	0	0	0	0
Friend/neighbour	6	3	3	3	5
Family member	2	0	0	0	1
NGO worker	2	0	0	0	1
Chief	0	0	0	0	0
Other	0	3	1	2	1

Table 39 Awareness of a key message on antenatal

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q68A. Have you heard that when you are pregnant you should visit the health centre for check-ups?					
Yes	97	100	100	100	98
No	3	0	0	0	2
Q68B. Where did you hear this? (for 945 women who have heard it)					
Health worker	99	100	100	100	99
Radio	4	3	5	4	4
Television	0	0	0	0	0
Newspaper	0	0	0	0	0
Friend/neighbour	6	4	2	3	5
Family member	2	1	0	0	1
NGO worker	3	0	0	0	1
Chief	1	0	0	0	0
Other	0	1	0	0	0

3.10 Religious Beliefs

Only a few respondents reported that their religious beliefs prevent them from using modern health care. The households who reported this were Zionist (oppose vaccinations and delivery at the health center) and Jehovah's Witness (oppose blood transfusions).

Table 40 Prevalence of religious beliefs which oppose use of modern health care

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q69. Do your religious beliefs prevent you from using some types of modern health care?					
Yes	0.4	0	0.4	0.2	0.3
No	99.6	100	99.6	99.8	99.7
Don't know	0	0	0	0	0

3.11 Chief Involvement

Around one third of households reported that their chief had spoken to the village on a health issue, and fewer than a third were aware of any by-laws regarding health issues. The most common topics for the chiefs to discuss and create by-laws on were latrines, hand washing and safe delivery.

Table 41 Involvement of chiefs in health issues

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q72. Has your chief ever spoken to the village about health issues?					
Yes	31	29	33	31	31
No	67	71	65	68	67
Don't know	2	0	2	1	2
Q73. What did they speak to you about? (for 298 households who reported that their chief had spoken to them)					
Malaria	15	14	26	21	18
Latrines	74	74	78	76	75
Hand washing	31	23	21	22	27
Taking children for treatment	11	16	11	13	12
Antenatal care or safe delivery	19	28	33	30	25
Family planning	7	12	3	7	7
Other (including home hygiene, bathroom, borehole and water treatment)	32	48	39	43	37

Question	Intervention Area (%)	Control Area (%)			Total (%)
	Katchale	Maluwa	Chiunjiza	Total Control	
Q74. Are there any by-laws in your village that require households to take an action on health issues?					
Yes	23	23	23	23	23
No	75	75	73	74	74
Don't know	3	2	4	3	3
Q75. What topics are the by-laws on? (for 219 households who reported that their village had by-laws)					
Malaria	7	4	13	8	8
Latrines	71	77	71	74	73
Hand washing	22	16	13	14	18
Taking children for treatment	6	9	5	7	6
Antenatal care or safe delivery	38	34	44	39	38
Family planning	6	2	0	1	4
Other (including home hygiene, bathroom, borehole and water treatment)	13	23	25	24	19

3.12 Male Involvement

Most women have primary responsibility for the care of sick children, although more than half of all women report that decisions related to child's health care are made jointly with their partner. Most husbands have accompanied their wife to at least one antenatal visit, although most do not accompany her every time.

Table 42 Male involvement in health issues

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q76. Who usually makes decisions about health care for your children?					
Respondent	35	29	35	32	33
Husband	12	7	15	11	11
Joint decision by couple	52	64	50	57	55
Someone else	0	0	0	0	0
Other	1	1	0	1	1
Q77. Who usually cares for your children when they are ill?					
Respondent	73	54	71	63	68
Husband	3	3	4	4	3
Jointly by couple	24	42	24	33	29
Someone else	0	0	0	0	0
Other	0	0	0	0	0
Q78. How many times has your husband accompanied you to an antenatal check-up?					
Never	25	15	22	18	22
Once	21	11	12	12	16
Several times	43	46	45	46	44
Every time	9	26	20	23	16
No husband	0	0	0	0	0
Never been to an antenatal check-up	2	1	1	1	1

3.13 Government Health Services

3.13.1 Health Centre

Almost all households in Katchale and Chiunjiza catchments report that they use the Health Centre in their area. In Maluwa a significant number of households use another government health facility (usually Mitundu Hospital) or Katchale Health Centre. Most households who have used a facility in the last 12 months rate the services as good or average.

Table 43 Use of Health Centres

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q79. Which government Health Centre do you use most often?					
Katchale Health Centre	95	14	0	7	51
Maluwa Health Centre	4	66	0	34	19
Chiunjiza Health Centre	1	0	90	44	22
Other government health facility	0	19	8	14	7
No government health facility	0	0	1	1	0
Don't know	0	0	0	0	0
Q80. Do you know which days and hours the Health Centre is open?					
Yes	95	96	98	97	96
No	5	4	2	3	4
Q81. Have you visited the Health Centre in the last 12 months?					
Yes	93	90	92	91	92
No	7	10	8	9	8
Q82. Overall, how would you rate the services you received at the Health Centre? (for 879 households who have visited the Health Centre in the last 12 months)					
Poor	10	16	7	12	11
Average	30	24	14	19	24
Good	61	60	79	69	65
Q83. Why have you not visited the Health Centre in the last 12 months? (for 73 households who have not visited the Health Centre in the last 12 months)					
No need to go	78	70	83	76	77
Do not know when it is open / concerned it may be closed	3	9	0	5	4
Husband would not give permission to go	0	0	6	2	1
Not enough money	0	0	0	0	0
Long distance	6	0	6	2	4

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Lack of transport / no money for transport	0	0	0	0	0
Not wanting to go alone	0	0	0	0	0
Concern that there may not be a female health provider	0	4	0	2	1
Concern that there may not be any health provider	0	13	0	7	4
Concern that there may be no drugs available	3	0	0	0	1
Concern that there may inadequate equipment or supplies	0	4	0	2	1
Unhappy with quality of services	3	0	0	0	1
Prefer traditional methods	3	0	0	0	1
Other	13	4	11	7	10

3.13.2 HSA

Around half of all families in Katchale have met their HSA, while in the control areas it is more than two thirds. However, most HSAs have only visited the respondent's village 1-3 times in the last 12 months.

Table 44 HAS activities

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q84. Have you ever personally met the HSA for your village?					
Yes	55	69	73	71	63
No	45	30	27	28	36
Don't know	0	1	0	1	1
Q85. How many times did the HSA come to your village in the last 12 months?					
None	24	20	13	17	21
Once	22	22	27	25	23
Two to three times	28	38	32	35	32
Four to six times	6	5	6	5	6
More than six times	6	8	10	9	8
Don't know	13	7	13	10	11

3.13.3 Mobile Clinic

Two thirds of households report that they have access to a mobile clinic for vaccinations (this excludes the static vaccination clinic at the Health Centre). Of those that have access, the majority know when and where the clinic runs and have visited it in the last 12 months. Most respondents rate the service as good.

Table 45 Use of Mobile Clinics

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q86. Do you have access to a Mobile Clinic where you can take children for vaccinations?					
Yes	65	64	77	70	67
No	35	36	23	29	32
Don't know	0	0	0	0	0
Q87. Do you know where the Mobile Clinic is located? (for 647 households that have access to a Mobile Clinic)					
Yes	100	99	100	100	100
No	0	1	0	0	0
Q88. Do you know which days and hours the Mobile Clinic is open? (for 647 households that have access to a Mobile Clinic)					
Yes	90	95	99	97	94
No	10	5	1	3	6
Q89. Have you visited the Mobile Clinic in the last 12 months? (for 647 households that have access to a Mobile Clinic)					
Yes	83	88	90	89	86
No	17	12	10	11	14
Q90. Overall, how would you rate the services you / your children received at the Mobile Clinic? (for 558 households that have visited the Mobile Clinic in the last 12 months)					
Poor	2	4	1	2	2
Average	18	13	9	11	14
Good	80	82	90	87	84
Q91. Why have you not visited the Mobile Clinic in the last 12 months? (for 89 households that have not visited the Mobile Clinic in the last 12 months)					
No need to go	55	50	72	61	57
Do not know when it is open / concerned it may be closed	6	11	0	6	6
Husband would not give permission to go	0	0	0	0	0
Not enough money	0	6	0	3	1
Long distance	2	0	0	0	1
Lack of transport / no money for transport	0	0	0	0	0

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Not wanting to go alone	0	0	0	0	0
Concern that there may not be a female health provider	0	0	0	0	0
Concern that there may not be any health provider	11	6	0	3	8
Concern that there may be no drugs available	0	0	0	0	0
Concern that there may inadequate equipment or supplies	0	0	0	0	0
Unhappy with quality of services	4	0	0	0	2
Prefer traditional methods	0	0	0	0	0
Other (including prefer to go to the health centre, busy, was away)	28	44	28	36	31

3.13.4 Village Clinic

Results for Village Clinics were only calculated for 360 households that are within Village Clinic catchment areas. Among those households, just over half are aware about the existence of the Village Clinic. Of those who are aware, only two thirds have used it in the last 12 months.

Table 46 Use of Village Clinics

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Q92. Do you have access to a Village Clinic where you can take sick children under 5 years old for treatment? (only for 360 households in a catchment area with a Village Clinic)					
Yes	57	65	53	57	57
No	43	35	44	41	42
Don't know	1	0	3	2	1
Q93. Do you know where the Village Clinic is located? (for 204 households that report they have access to a Village Clinic)					
Yes	100	100	100	100	100
No	0	0	0	0	0

Question	Intervention Area (%) Katchale	Control Area (%) Maluwa	Chiunjiza	Total Control	Total (%)
Q94. Do you know which days and hours the Village Clinic is open? (for 204 households that report they have access to a Village Clinic)					
Yes	91	97	98	98	95
No	9	3	2	2	5
Q95. Have you visited the Village Clinic in the last 12 months? (for 204 households that report they have access to a Village Clinic)					
Yes	66	72	89	82	74
No	34	28	11	18	26
Q96. Overall, how would you rate the services that you / your children received at the Village Clinic? (for 151 households that have visited the Village Clinic in the last 12 months)					
Poor	7	4	2	2	5
Average	24	39	20	26	25
Good	69	57	79	71	70
Q97. Why have you not visited the Village Clinic in the last 12 months? (for 53 households that have not visited the Village Clinic in the last 12 months)					
No need to go	49	27	57	39	45
Do not know when it is open / concerned it may be closed	26	0	0	0	17
Husband would not give permission to go	0	0	0	0	0
Not enough money	0	0	0	0	0
Long distance	0	0	0	0	0
Lack of transport / no money for transport	0	0	0	0	0
Not wanting to go alone	0	0	0	0	0
Concern that there may not be a female health provider	0	0	0	0	0
Concern that there may not be any health provider	6	18	0	11	8
Concern that there may be no drugs available	6	0	0	0	4
Concern that there may inadequate equipment or supplies	0	18	0	11	4
Unhappy with quality of services	9	0	0	0	6
Prefer traditional	0	0	0	0	0

	Intervention Area (%)	Control Area (%)			
Question	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
methods					
Other (including prefer to go to the health centre, was away)	11	64	43	56	26

Further analysis of the health seeking questions was conducted for households in Village Clinic areas. The results show that only a small percentage of under 5 children who were sick with diarrhea or fever in the last 2 weeks were taken to a Village Clinic. The majority were taken to the Health Centre or received no treatment at all.

Table 47 Location where under 5 children who were sick with diarrhea in the last 2 weeks were taken for treatment (for 360 households that are within Village Clinic catchment areas)

	Intervention Area (%)	Control Area (%)			
Symptom	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Village Clinic	8	24	8	12	10
Health Centre	54	24	46	40	47
Other Health Facility	0	17	24	23	12
Shop, traditional, other	7	6	4	4	5
No treatment sought	31	29	18	21	26

Table 48 Location where under 5 children who were sick with fever in the last 2 weeks were taken for treatment (for 360 households that are within Village Clinic catchment areas)

	Intervention Area (%)	Control Area (%)			
Symptom	Katchale	Maluwa	Chiunjiza	Total Control	Total (%)
Village Clinic	7	17	7	10	9
Health Centre	55	24	39	34	45
Other Health Facility	6	21	18	19	12
Shop, traditional, other	8	17	19	19	13
No treatment sought	24	21	17	18	21

4 Indicators

Many questions on the baseline survey were taken from the MDHS. The following table compares the baseline results in the intervention and control areas to the national results for key indicators in the 2010 MDHS.

TOPIC	INDICATOR	DEFINITION	DATA SOURCE	BASELINE INTERVENTION AREA	BASELINE CONTROL AREA	NATIONAL AVERAGE (2010 MDHS)
Mortality	Neonatal mortality	The number of deaths of children less than one month old per 1000 live births between January 2009 and December 2013.	Baseline survey birth histories section (Q20 A-G)	24	25	31
	Infant mortality	The number of deaths of children less than 1 year old per 1000 live births between February 2008 and January 2013.	Baseline survey birth histories section (Q20 A-G)	51	54	66
	Under 5 mortality	Probability of dying between birth and exactly five years of age expressed per 1,000 live births between February 2004 and January 2009.	Baseline survey birth histories section (Q20 A-G)	114	153	112
Morbidity	Prevalence of fever in children under 5 years	The total number of children under 5 years who had a fever in the last 2 weeks (Q63H=1) divided by the total number of children under 5 years surveyed.	Baseline survey question *"63H.Has (name) been ill with a fever in the last 2 weeks?"*	39%	35%	34.5%
	Prevalence of diarrhoea in children under 5 years	The total number of children under 5 years who had a diarrhoea in the last 2 weeks (Q63C=1) divided by the total number of children under 5 years surveyed.	Baseline survey question *"63C.Has (name) had diarrhoea in the last 2 weeks?"*	24%	22%	17.5%

TOPIC	INDICATOR	DEFINITION	DATA SOURCE	BASELINE INTERVENTION AREA	BASELINE CONTROL AREA	NATIONAL AVERAGE (2010 MDHS)
	Prevalence of Acute Respiratory Infection (ARI) symptoms in children under 5 years	The total number of children under 5 years who had a cough (Q63I=1) accompanied by short, rapid breathing (Q63J=1) which was chest-related (Q63K=1) divided by the total number of children under 5 years surveyed.	Baseline survey questions *"63I.Has (name) had an illness with a cough at any time in the last 2 weeks"*, *"63J. When (name) had an illness with a cough, did he/she breath faster than normal with short, rapid breaths or have difficulty breathing"* and *"63K. Was the fast or difficult breathing due to a problem in the chest or to a blocked or runny nose?"*	5%	2%	6.8%
Health seeking behaviour and treatment	Percentage of children under 5 years with fever for whom advice or treatment was sought from a health facility or provider	The total number of children who had a fever in the last 2 weeks (Q63H=1) and were taken to a health facility or provider (Q63M=1-9) divided by the total number of children who had a fever in the last 2 weeks (Q63H=1)	Baseline survey question *"63L. Did you seek advice or treatment for the illness from any source?"* and *"63M.Where did you seek advice or treatment?"*	67%	65%	64.6%
	Percentage of children under 5 years with fever who received antimalarial drugs	The total number of children who had a fever in the last 2 weeks (Q63H=1) and were given antimalarial drugs (Q63P=1 or 2) divided by the total number of children who had a fever in the last 2 weeks (Q63=1)	Baseline survey question *"63P. What drugs did (name) take"?*	47%	47%	43.4%
	Percentage of children under 5 years with diarrhoea for whom advice or treatment was sought from a health facility or provider	The total number of children who had diarrhoea in the last 2 weeks (Q63C=1) and were taken to a health facility or provider (Q63E=1-9) divided by the total number of children who had diarrhoea in the last 2 weeks (Q63C=1)	Baseline survey question *"63D.Did you seek advice or treatment for the illness from any source?"* and *"63E.Where did you seek advice or treatment?"*	67%	71%	64.6%
	Percentage of children under 5 years with diarrhoea who received Oral Rehydration Salts (ORS) or pre-packaged liquid	The total number of children who had diarrhoea in the last 2 weeks (Q63C=1) and were given Oral Rehydration Salts or pre-packaged liquid (Q63G=1) divided by the total number of children who had diarrhoea in the last 2 weeks (Q63C=1)	Baseline survey question *"63G.Was he/she given a fluid made from a special packet called THANZI or ORS?"*	51%	65%	69.0%

TOPIC	INDICATOR	DEFINITION	DATA SOURCE	BASELINE INTERVENTION AREA	BASELINE CONTROL AREA	NATIONAL AVERAGE (2010 MDHS)
	Percentage of children under 5 years with Acute Respiratory Symptoms (ARI) for whom advice or treatment was sought from a health facility or provider	The total number of children under 5 years who had a cough (Q63I=1) accompanied by short, rapid breathing (Q63J=1) which was chest-related (Q63K=1) and were taken to a health facility or provider (Q63M=1-9) divided by the total number of children who had these symptoms in the last 2 weeks	Baseline survey question *"63L. Did you seek advice or treatment for the illness from any source?"* and *"63M.Where did you seek advice or treatment?"*	77%	85%	70.3%
Sanitation	Percentage of households using any type of toilet/latrine	Number of households using any type of sanitation facility (Q653=1-7) divided by the total number of households surveyed	Baseline survey question *"53.What kind of toilet facility do members of your household usually use?"* verified by direct observation	78%	63%	89.1%
Bed nets	Percentage of children under 5 years old who slept under any bed net last night	Number of children under 5 years old who slept under a bed net last night (Q63B=1) divided by the total number of children under 5 years old surveyed	Baseline survey question *"63B. Did (name) sleep under a mosquito net last night?"*	61%	74%	45.2% *Note: Mass distribution of bed nets was performed in 2011 and 2012*
Safe delivery	Percentage of pregnant women attending at least one antenatal check-up	Number of women who attended at least one antenatal check-up (Q26=1) for their most recent pregnancy divided by the total number of women surveyed	Baseline survey question *"26.Did you see anyone for antenatal care for this pregnancy?"*	98%	98%	97.6%
	Percentage of deliveries at a health facility	Number of births delivered at a health facility (Q33=3-10) divided by the total number of women surveyed	Baseline survey question *"33.Where did you give birth to (name)?"*	83%	85%	73.2%
	Percentage of pregnant women attending at least one postnatal check-up within 24 hours of birth	Number of women who attended at least one postnatal check-up (Q36=1) for their most recent pregnancy within 24 hours of the birth (Q37 Hours=0-24) divided by the total number of women surveyed	Baseline survey question *"36.After (name) was born, did any healthcare provide check on your health?"* and *"37.How long after delivery did the first check take place?"*	61%	73%	29.1%

TOPIC	INDICATOR	DEFINITION	DATA SOURCE	BASELINE INTERVENTION AREA	BASELINE CONTROL AREA	NATIONAL AVERAGE (2010 MDHS)
Family planning	Unmet need for family planning	Number of married or sexually active women aged 15-49 years who report that they do not want to have another child soon (Q39=2 or 3) but are not using a modern family planning method (Q42=2), divided by the total number of married or sexually active women surveyed	Baseline survey question *"39. Would you like to have (a/another) child, or would you prefer not to have any (more) children?"* and *"42.Are you currently doing something or using any method to delay or avoid getting pregnant?"*	30%*	34%*	18.5%

* The baseline survey only sampled households with children under 5 years old, while the 2010 MDHS randomly sampled all households. Women using family planning are less likely to have a child under 5 years old. Therefore, the unmet need for family planning in the baseline survey cannot be directly compared to the result from the 2010 MDHS.

ANNEX A: Questionnaire

INTER AIDE CHILD HEALTH PROGRAM
BASELINE SURVEY QUESTIONNAIRE

Health centre	1○ Katchale 2○ Maluwa 3○ Chiunjiza
Village	#____ Village name:
Name of woman completing survey	Photo ID:
Name of husband	

Interviewer	Name	Signature	Date
Supervisor check	Name	Signature ○ Review ○ Audit	Date
Keyed by	Name	Signature	Date

Introduction and Informed Consent

Zikomo! Ine ndi……ndipo ndikugwira ntchito ndi Inter Aide. Tikupanga kafukufuku wa zaumoyo m'dela lino ndipo ndingakondwe ngati mungatenge nawo mbali. Zotsatira za kafukufuku ameneyu zitithandiza kupanga ndondomeko yabwino ya zaumoyo. Mafunsowa satenga nthawi, ndi pakati pa mphindi 15 kapena 30 basi.

Ndiye ndifunsa nawo zambiri za pa banja lanu lino. Mayankho anu ndi achinsinsi ndipo sitikauza anthu ena kupatula ife amene tikupanga kafukufukuyu.

Kupanga nawo kafukufukuyu ndi kwa ulere komanso kodzipeleka. Ngati mungaone kuti funso lina simukufuna kuyankha, mukhoza kutero ndipo tikhoza kupita pa funso lina. Muli omasuka kuyankha mafunso onse kapena ayi. Komabe, ine ndikukhulupilira kuti mutenga nawo gawo mkafukufukuyu chifukwa mayankho anu azathandiza kwambiri. Ndikutenganinso chithunzi.

Muli ndi funso? Ngati mwavomeleza kutenga nawo gawo, sainani kapena dindani m'munsimu.

ASK FOR THE HEALTH PASSPORT OF THE RESPONDENT AND HER CHILDREN

NDAVOMERA

Thumb print / signature

RESPONDENT DEMOGRAPHICS	
1. How old were you at your last birthday? *Kodi muli ndi zaka zingati (zokwanira/zathunthu?*	_____ years
2. What is your marital status? *Ndinu okwatiwa? fufuzani*	1 O Single 2 O Married to monogamous husband 3 O Married to polygamous husband 4 O Divorced 5 O Widowed
3. Have you ever attended school? *Munayimbako sukulu?*	1 O Yes 2 O No ➔ **Q6**
4. What is the highest level of school you attended: primary, secondary or higher? *Kodi sukulu munapanga bwanji?*	1 O Primary 2 O Secondary 3 O Higher
5. What is the highest standard / form / year you completed at that level? *Kodi munalekeza gawo liti kapena kalasi yachingati?*	_____ standard / form / year
HOUSEHOLD POVERTY INDEX	
6. How many household members are 14-years-old or younger? *Kodi muli ndi ana angati a zaka 14 kapena kutsika m'munsi m'mbanja lino?*	0 O Five or more 4 O Four 6 O Three 12 O Two 19 O One 30 O None
7. How many household members worked their main activity in the past seven days as a farmer (mlimi)? *Kodi ndi angati m'banja lino anagwira ntchito ya ulimi msabata yapitayi?*	0 O Four or more 2 O Three 7 O Two 8 O One 10 O None
8. Can the female head read a one-page letter in any language? *Kodi wamkulu wa banja lino (mzimayi), angathe kuwerenga kalata ya tsamba limodzi mchilankhulo china chake?*	0 O No 5 O Yes 9 O No female head/spouse
9. The roof of the main dwelling is predominantly made of what material? *Kodi nyumba yanu munafolera ndi chiyani?*	0 O Grass 4 O Anything besides grass
10. What is your main source of cooking fuel? *Kodi moto ophikira mumasonkhera chiyani?*	0 O Collected firewood from forest reserve, crop residue, sawdust, animal waste, other or none 1 O Collected firewood from unfarmed areas of community 5 O Collected firewood from own woodlot, community woodlot, or other places 7 O Purchased firewood 9 O Paraffin, charcoal, gas, or electricity
11. What is your main source of lighting fuel? *Kodi mumaunikira chiyani?*	0 O Collected firewood, grass, other or none 4 O Paraffin 13 O Purchased firewood, electricity, gas, battery/dry cell (torch), or candles

12. Does the household own any lanterns (paraffin)? *Kodi muli ndi nyale ya parafini?*	0 O No 5 O Yes
13. Does the household own any bicycles, motorcycles / scooters, cars, mini-buses, or lorries? *Kodi muli ndi njinga yakapalasa, njinga yamoto, galimoto, basi kapena galimoto yaikulu?*	0 O No 5 O Yes
14. Does the household own any irons (for pressing clothes)? *Kodi muli ndi ayiloni?*	0 O No 8 O Yes
15. How many sickles does the household own? Kodi muli ndi masikilo(chikwakwa) angati?	0 O None 3 O One 7 O Two or more
BIRTH HISTORY	
Now I would like to ask you about all the births you have had during your life.	
16. Do you have any sons or daughters to whom you have given birth who are now living with you? *Kodi muli ndi ana akazi kaya amuna obeleka nokha amene mukukhala nawo panopa?* A. How many sons? *Ana amuna ndi angati?* B. How many daughters? *Ana akazi ndi angati?*	1 O Yes 2 O No ➔ **Q17** _____ sons at home _____ daughters at home
17. Do you have any sons or daughters to whom you have given birth who are alive but do not live with you? *Muli ndi ana anu akazi kaya amuna obeleka nokha amene ali moyo koma simukukhala nawo?* A. How many sons? *Amuna alipo angati?* B. How many daughters? *Akazi alipo angati?*	1 O Yes 2 O No ➔ **Q18** _____ sons elsewhere _____ daughters elsewhere
18. Have you ever given birth to a boy or girl who was born alive but later died? *Kodi munabelekako mwana, wamkazi kaya wamwamuna amene anabadwa wamoyo koma kenaka anamwalira?* *PROBE: Any baby who cried or showed signs or life but did not survive? Funsitsani ngati mwanayo analira kapena kuonetsa zizindikiro za moyo* A. How many boys have died? *Ana amuna ndi angati amene anamwalira?* B. How many girls have died? *Nanga akazi ndi angati?*	1 O Yes 2 O No ➔ **Q19** _____ boys died _____ girls died
19. SUM ANSWERS FOR PREVIOUS THREE QUESTIONS Just to make sure that I have this right: you have had in TOTAL _____ births during your life. Is that correct? *Kungofuna kuti ndimvetsetse, mwati m'moyo wanu munabelekako ana a moyo …… Ndi zoona?*	1 O Yes 2 O No (probe and correct)

20. Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had. *Tsopano ndikufuna kuti ndilembe maina a ana anu onse; kaya amoyo ngakhalenso amene anamwalira kuyambira oyamba*

RECORD NAMES OF ALL THE BIRTHS. RECORD TWINS AND TRIPLETS ON SEPARATE ROWS. CHECK THE TOTAL BIRTHS IN THE TABLE AND COMPARE TO PREVIOUS QUESTION. IF NUMBERS ARE DIFFERENT PROBE AND RECONCILE.

PROBE: Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME), including any children who died after birth? Fufuzani ngati panabadwanso mwana wina pakatipa pasanabadwe uyu (dzina) kuphatikizapo amene anamwalira.

A. What was the name given to your (first/next) baby? *Mwana wanu woyamba anali ndani/ndi ndani?*	B. Is (NAME) a boy or girl? *Kodi (dzina) ndi wamamuna kapena wamkazi?*	C. In what month and year was (NAME) born? *Kodi anabadwa mwezi ndi chaka chiti?*	D. Is (NAME) still alive? *Kodi (dzina) ali moyo?*	**IF ALIVE** E. How old was (NAME) at his/her last birthday? *Ngati ali moyo, ali ndi zaka zingati (zokwanira/zathunthu)?*	**IF DEAD** F. How old was (NAME) when he/she died? *Ngati anamwalira, anamwalira ali ndi zaka zingati (zokwanira/zathunthu)?* *Record days if less than 1 month, months if less than 2 years, or years.*	**IF DEAD** G. What was the cause of death? *Amadwala chiani?*
1.	1O Boy 2O Girl	Month _____ Year _____	1O Yes ➔ **E** 2O No ➔ **F & G**	_____ years	Days _____ Months _____ Years _____	1O Fever / malaria 2O Diarrhea 3O Cough / pneumonia 4O Neonatal 5O Accident / injury 6O Other _____ 7O Don't know / unclear
2.	1O Boy 2O Girl	Month _____ Year _____	1O Yes ➔ **E** 2O No ➔ **F & G**	_____ years	Days _____ Months _____ Years _____	1O Fever / malaria 2O Diarrhea 3O Cough / pneumonia 4O Neonatal 5O Accident / injury 6O Other _____ 7O Don't know / unclear
3.	1O Boy 2O Girl	Month _____ Year _____	1O Yes ➔ **E** 2O No ➔ **F & G**	_____ years	Days _____ Months _____ Years _____	1O Fever / malaria 2O Diarrhea 3O Cough / pneumonia 4O Neonatal 5O Accident / injury 6O Other _____ 7O Don't know / unclear
4.	1O Boy 2O Girl	Month _____ Year _____	1O Yes ➔ **E** 2O No ➔ **F & G**	_____ years	Days _____ Months _____ Years _____	1O Fever / malaria 2O Diarrhea 3O Cough / pneumonia 4O Neonatal 5O Accident / injury 6O Other _____ 7O Don't know / unclear

A. What was the name given to your (first/next) baby? *Mwana wanu woyamba anali ndani/ndi ndani?*	B. Is (NAME) a boy or girl? *Kodi (dzina) ndi wamamuna kapena wamkazi?*	C. In what month and year was (NAME) born? *Kodi anabadwa mwezi ndi chaka chiti?*	D. Is (NAME) still alive? *Kodi (dzina) ali moyo?*	**IF ALIVE** E. How old was (NAME) at his/her last birthday? *Ngati ali moyo, ali ndi zaka zingati (zokwanira/zathunthu)?*	**IF DEAD** F. How old was (NAME) when he/she died? *Ngati anamwalira, anamwalira ali ndi zaka zingati (zokwanira/zathunthu)?* *Record days if less than 1 month, months if less than 2 years, or years.*	**IF DEAD** G. What was the cause of death? *Amadwala chiani?*
5.	1O Boy 2O Girl	Month _____ Year _____	1O Yes ➔ **E** 2O No ➔ **F & G**	_____ years	Days _____ Months _____ Years _____	1O Fever / malaria 2O Diarrhea 3O Cough / pneumonia 4O Neonatal 5O Accident / injury 6O Other _____ 7O Don't know / unclear
6.	1O Boy 2O Girl	Month _____ Year _____	1O Yes ➔ **E** 2O No ➔ **F & G**	_____ years	Days _____ Months _____ Years _____	1O Fever / malaria 2O Diarrhea 3O Cough / pneumonia 4O Neonatal 5O Accident / injury 6O Other _____ 7O Don't know / unclear
7.	1O Boy 2O Girl	Month _____ Year _____	1O Yes ➔ **E** 2O No ➔ **F & G**	_____ years	Days _____ Months _____ Years _____	1O Fever / malaria 2O Diarrhea 3O Cough / pneumonia 4O Neonatal 5O Accident / injury 6O Other _____ 7O Don't know / unclear
8.	1O Boy 2O Girl	Month _____ Year _____	1O Yes ➔ **E** 2O No ➔ **F & G**	_____ years	Days _____ Months _____ Years _____	1O Fever / malaria 2O Diarrhea 3O Cough / pneumonia 4O Neonatal 5O Accident / injury 6O Other _____ 7O Don't know / unclear
9.	1O Boy 2O Girl	Month _____ Year _____	1O Yes ➔ **E** 2O No ➔ **F & G**	_____ years	Days _____ Months _____ Years _____	1O Fever / malaria 2O Diarrhea 3O Cough / pneumonia 4O Neonatal 5O Accident / injury 6O Other _____ 7O Don't know / unclear

A. What was the name given to your (first/next) baby? *Mwana wanu woyamba anali ndani/ndi ndani?*	B. Is (NAME) a boy or girl? *Kodi (dzina) ndi wamamuna kapena wamkazi?*	C. In what month and year was (NAME) born? *Kodi anabadwa mwezi ndi chaka chiti?*	D. Is (NAME) still alive? *Kodi (dzina) ali moyo?*	**IF ALIVE** E. How old was (NAME) at his/her last birthday? *Ngati ali moyo, ali ndi zaka zingati (zokwanira/zathunthu)?*	**IF DEAD** F. How old was (NAME) when he/she died? *Ngati anamwalira, anamwalira ali ndi zaka zingati (zokwanira/zathunthu)?* *Record days if less than 1 month, months if less than 2 years, or years.*	**IF DEAD** G. What was the cause of death? *Amadwala chiani?*
10.	1O Boy 2O Girl	Month _____ Year _____	1O Yes ➔ **E** 2O No ➔ **F & G**	_____ years	Days _____ Months _____ Years _____	1O Fever / malaria 2O Diarrhea 3O Cough / pneumonia 4O Neonatal 5O Accident / injury 6O Other _____ 7O Don't know / unclear
11.	1O Boy 2O Girl	Month _____ Year _____	1O Yes ➔ **E** 2O No ➔ **F & G**	_____ years	Days _____ Months _____ Years _____	1O Fever / malaria 2O Diarrhea 3O Cough / pneumonia 4O Neonatal 5O Accident / injury 6O Other _____ 7O Don't know / unclear
12.	1O Boy 2O Girl	Month _____ Year _____	1O Yes ➔ **E** 2O No ➔ **F & G**	_____ years	Days _____ Months _____ Years _____	1O Fever / malaria 2O Diarrhea 3O Cough / pneumonia 4O Neonatal 5O Accident / injury 6O Other _____ 7O Don't know / unclear

PREGNANCY	
21. Are you pregnant now? *Kodi muli ndi mimba panopa?*	1 O Yes 2 O No ➔ **Q24** 3 O Unsure ➔ **Q24**
22. How many months pregnant are you? *Muli ndi mimba ya miyezi ingati?*	_____months *(Record number of completed months)*
23. At the time you became pregnant, did you want a child then? *Nthawi imene munakhala ndi mimba imeneyi, munkafuna kukhala ndi mwana?*	1 O Wanted a child then 2 O Wanted to wait until later 3 O Did not want any more children
24. Have you ever had a pregnancy that miscarried, was aborted or ended in a stillbirth? *Munakhalako ndi mimba imene inangochoka yokha, kutaya, kapena kubeleka mwana wakufa kale?*	1 O Yes 2 O No ➔ **Q26** 3 O Don't know ➔ **Q26**

25. When did the last such pregnancy end? *Kodi mimba imeneyi inaqchoka liti?*	Month _____ Year _____
Now I want to ask you about when you were pregnant with your youngest child, (NAME). *Tsopano ndikufuna ndikufunseni za mimba ya mwana womalizayu*	
26. Did you see anyone for antenatal care for this pregnancy? *Munapitako ku sikelo ya amayi apakati mukuyembezera mwana ameneyu?*	1 O Yes 2 O No ➔ **Q31** 3 O Don't know ➔ **Q31**
27. Whom did you see? Anyone else? *Ngati ndi choncho, anakuonani ndi ndani? Palinso wina?* *(Record all mentioned)*	**Health Personnel** 1 ☐ Doctor / Clinical Officer / Medical Assistant 2 ☐ Nurse / Midwife 3 ☐ Patient Attendant 4 ☐ HSA **Other Person** 5 ☐ Traditional Birth Attendant 6 ☐ Other, specify _____
28. Where did you receive antenatal care for this pregnancy? Anywhere else? *Kodi sikelo ya mimba imeneyi mumapangira kuti? Palinso kwina?* *(Record all mentioned)*	**Home** 1 ☐ Your home 2 ☐ Other home (including TBA home) **Public Sector** 3 ☐ Govt Hospital 4 ☐ Govt Health Centre 5 ☐ Mobile Clinic 6 ☐ Other public **CHAM/Mission** 7 ☐ Hospital 8 ☐ Health Centre **Private Medical Sector** 9 ☐ Private Hospital / Clinic / Doctor 10 ☐ Other private medical 11 ☐ BLM 12 ☐ Other, specify _____
29. How many months pregnant were you when you first received antenatal care for this pregnancy? *Kodi munali ndi mimba ya miyezi ingati pamene mumayamba sikelo ya a pakati?*	_____ months *(Record completed months)*
30. How many times did you receive antenatal care during this pregnancy? *Munapitako ku sikelo ya apakati kangati ndi mimba iyiyi?*	_____ times
31. When (NAME) was born, was he/she very large, larger than average, average, smaller than average, or very small? *Kodi pamene mwana uyu (dzina) amabadwa, anabadwa wamkulu kwambiri, wamkulu, wa pakati mpakati, wamng'ono kapena wamng'ono kwambiri?*	1 O Very large 2 O Larger than average 3 O Average 4 O Smaller than average 5 O Very small 6 O Don't know

32. Who assisted with the delivery of (NAME)? Anyone else? *Anakuthandizani kuchira ndi ndani?* *(Record all mentioned)*	**Health Personnel** 1 ☐ Doctor / Clinical Officer / Medical Assistant 2 ☐ Nurse / Midwife 3 ☐ Patient Attendant **Other Person** 4 ☐ Traditional Birth Attendant 5 ☐ Relative/friend 6 ☐ Other, specify _____ 7 ☐ No one
33. Where did you give birth to (NAME)? *Munachilira kuti?*	**Home ➔ Q34** 1 ○ Your home 2 ○ Other home (including TBA home) **Public Sector ➔ Q35** 3 ○ Govt Hospital 4 ○ Govt Health Centre 5 ○ Other public **CHAM/Mission ➔ Q35** 6 ○ Hospital 7 ○ Health Centre **Private Medical Sector ➔ Q35** 8 ○ Private Hospital / Clinic 9 ○ Other private medical 10 ○ BLM 11 ○ Other, specify _____ ➔ **Q36**
34. *IF AT HOME OR TBA:* Why did you decide not to go to a health facility to give birth? Any other reason? *Ngati munachilira kunyumba kwanu kaya kwa azamba, ndi chifukwa chiyani simunapite ku chipatala? Pali zifukwa?* *(record all mentioned)*	1 ☐ Husband would not give permission to go 2 ☐ Not enough money 3 ☐ Long distance to the health facility 4 ☐ Lack of transport / no money for transport 5 ☐ Not wanting to go alone 6 ☐ Concern that there may not be a female health provider 7 ☐ Concern that there may not be any health provider 8 ☐ Concern that there may be no drugs available 9 ☐ Concern that there may inadequate equipment or supplies 10 ☐ Unhappy with quality of services 11 ☐ Prefer traditional methods 12 ☐ Birth happened unexpectedly 13 ☐ Other reason _____ ➔ **Q36**
35. *IF AT HEALTH FACILITY:* Overall, how would you rate the quality of the maternity services you received at the health facility? *Ngati munachilira ku chipatala, mukuona kwanu thandizo linali bwanji?*	1 ○ Poor 2 ○ Average 3 ○ Good

36. After (NAME) was born, did any health care provider or a traditional birth attendant check on your health? *Pamene mwanayu (dzina) anabadwa, wa za chipatala kapena mzamba anakuyesani?*	1 O Yes 2 O No ➔ **Q39** 3 O Don't know ➔ **Q39**
37. How long after delivery did the first check take place? *Zinatenga nthawi yaitali mwanji asanakuyeseni?* *(If less than one hour record one hour, if less than one day record hours, if less than one week record days)*	_____ hours _____ days _____ weeks
38. Who checked on your health at that time? Anyone else? *Anakuyesani ndi ndani? Palinso wina?* *(Record all mentioned)*	**Health Personnel** 1 ☐ Doctor / Clinical Officer / Medical Assistant 2 ☐ Nurse / Midwife 3 ☐ Patient Attendant **Other Person** 4 ☐ Traditional Birth Attendant 5 ☐ Relative/friend 6 ☐ Other, specify _____ 7 ☐ No one
FAMILY PLANNING	
39. Do you want to have another child now, do you want to wait until later, or do you not want any more children at all? *Mukufunanso ana ena panopa, kapena mudikira pang'ono, kapena basi simukufunanso?*	1 O Want a child now 2 O Want to wait until later 3 O Do not want any more children
40. Have you ever heard of (METHOD) *Kodi mudavako za (njira)?*	
A. Female sterilization – *Kutseka kwa amai*	1 O Heard about it 2 O Never heard about it
B. Male sterilization – *Kutseka kwa abambo*	1 O Heard about it 2 O Never heard about it
C. Pill – *Mapilitsi*	1 O Heard about it 2 O Never heard about it
D. IUD – *Za chingwe choika m'chibelekelo (Loop)*	1 O Heard about it 2 O Never heard about it
E. Injectables – *Za jakisoni (Depo)*	1 O Heard about it 2 O Never heard about it
F. Implants – *Zodzala mu thupi ngati pa mkono (Norplant)*	1 O Heard about it 2 O Never heard about it
G. Male condom – *Makondomu a bamboo*	1 O Heard about it 2 O Never heard about it
H. Female condom – *Makondomu a amai*	1 O Heard about it 2 O Never heard about it

I.	Rhythm or periodic abstinence – *Mumayendera yoziletsa mukatsala pang'ono kusamba (Mwezi ulionse kumaziletsa pamene mukudziwa kuti mutate mugonane ndi mwamuna mukhoza kutenga mimba)*	1 O Heard about it 2 O Never heard about it
J.	Withdrawal – *Abambo sathira umuna*	1 O Heard about it 2 O Never heard about it
K.	Emergency contraception – *Mumatsata njira za pangozi (kumwa maknhwala olera pamene mwagonana mosaziteteza)*	1 O Heard about it 2 O Never heard about it
L.	Have you heard of any other ways or methods that women or men can use to avoid pregnancy? *Munamvapo za njira zina zimene amai kapena abambo amagwiritsa ncthito ngati zolelera*	Specify _____
41.	Are decisions related to contraception mainly your decision, mainly your husband's decision, or do you both decide together? *Kodi chisankho chakulera chimakhala chanu, a amuna anu kapena mumagwirizana?*	1 O Mainly respondent 2 O Mainly husband 3 O Joint decision by couple 4 O Other, specify_____
42.	Are you currently doing something or using any method to delay or avoid getting pregnant? *Kodi mukulera panopa?*	1 O Yes 2 O No ➔ **Q47**
CURRENTLY USING A METHOD		
43.	Which method are you using? Any others? *Mukugwiritsa njira yanji yolelera? Palinso ina?* *(Record all mentioned)*	1 ☐ Female sterilization 2 ☐ Male sterilization 3 ☐ Pill 4 ☐ IUD 5 ☐ Injectables 6 ☐ Implants 7 ☐ Male condom 8 ☐ Female condom 9 ☐ Rhythm or periodic abstinence 10 ☐ Withdrawal 11 ☐ Emergency contraception 12 ☐ Other, specify _____
44.	Since when have you been using (CURRENT METHOD) without stopping? *Munayamba kugwiritsa ntchito njira imeneyi liti osasiya?*	Month _____ Year _____

45. Where did you obtain (CURRENT METHOD) when you started using it? *Njira yolelera mukutsatirayi munakayambira kuti?*	**Public Sector** 1 O Govt Hospital 2 O Govt Health Centre 3 O Govt Health Post / Outreach 4 O Mobile Clinic 5 O HSA 6 O CBDA/Door to Door 7 O Other public **CHAM/Mission** 8 O Hospital 9 O Health Centre 10 O Mobile Clinic 11 O Door to Door **Private Medical Sector** 12 O Private Hospital / Clinic / Doc. 13 O Pharmacy 14 O Mobile Clinic 15 O CBDA/Door to Door 16 O Other private medical 17 O BLM 18 O MACRO 19 O Youth Drop In Centre **Other source** 20 O Shop 21 O Church 22 O Friend / Relative 23 O Other, specify _____
46. Does your husband know that you are using a method of family planning? *Kodi amuna anu akudziwa kuti mukulera?*	1 O Yes 2 O No 3 O Don't know ➔ **Q50**
NOT CURRENTLY USING A METHOD	
47. Do you know a place where you can obtain a method of family planning? *Mukudziwa kumene mungapeze njira zakulera?*	1 O Yes 2 O No ➔ **Q49**

48. Where is that? Any other place? *Ndikuti? Palinso kwina?* *(record all mentioned)*	**Public Sector** 1 ☐ Govt Hospital 2 ☐ Govt Health Centre 3 ☐ Govt Health Post / Outreach 4 ☐ Mobile Clinic 5 ☐ HSA 6 ☐ CBDA/Door to Door 7 ☐ Other public **CHAM/Mission** 8 ☐ Hospital 9 ☐ Health Centre 10 ☐ Mobile Clinic 11 ☐ Door to Door **Private Medical Sector** 12 ☐ Private Hospital / Clinic / Doc. 13 ☐ Pharmacy 14 ☐ Mobile Clinic 15 ☐ CBDA/Door to Door 16 ☐ Other private medical 17 ☐ BLM 18 ☐ MACRO 19 ☐ Youth Drop In Centre **Other source** 20 ☐ Shop 21 ☐ Church 22 ☐ Friend / Relative 23 ☐ Other, specify _____

49. Can you tell me why you are not using a method? Any other reason? *Mungandiuze chifukwa chiyani simukulera/ Pali chifukwa china?* *(Record all mentioned)*	1 ☐ Want another child now *(CHECK Q39)* 2 ☐ Not married **Fertility-related reasons** 3 ☐ Not having sex 4 ☐ Infrequent sex 5 ☐ Menopausal/hysterectomy 6 ☐ Infertile/low fertility 7 ☐ Had a baby recently 8 ☐ Breastfeeding 9 ☐ Should be left to fate **Opposition to use** 10 ☐ Respondent opposed 11 ☐ Husband opposed 12 ☐ Others opposed 13 ☐ Religious prohibition **Lack of knowledge** 14 ☐ Knows no method 15 ☐ Knows no source **Method-related reasons** 16 ☐ Health concerns 17 ☐ Fear of side effects 18 ☐ Lack of access/too far 19 ☐ Costs too much 20 ☐ Inconvenient to use 21 ☐ Interferes with body's normal processes 22 ☐ Other, specify _____ 23 ☐ Don't know
HYGIENE & SANITATION	
50. What is the main source of drinking water for members of your household? *Kodi madzi akumwa mumakatunga kuti pa banja lino?*	**Piped water** 1 O Piped into dwelling 2 O Piped into yard/plot 3 O Public tap/standpipe 4 O Tube well or borehole **Dug well** 5 O Protected well 6 O Unprotected or semi-protected well **Water from spring** 7 O Protected spring 8 O Unprotected spring 9 O Rainwater 10 O Tanker truck 11 O Cart with small tank 12 O Surface water (river / dam / lake / pond / stream / canal / irrigation water) 13 O Bottled water 14 O Other, specify _____

51. Do you do anything to the water to make it safe for drinking? *Kodi mumapanga chilichonse kuti madzi anu akumwa akhale abwino, aukhondo?*	1 O Yes 2 O No ➔ **Q53** 3 O Don't know ➔ **Q53**
52. What do you usually do to make the water safe to drink? Anything else? *Kodi mumatani kuti madzi anu akumwa akhale abwino/aukhondo, Palinso china? (Lembani zonse)* *(record all mentioned)*	1 ☐ Boil 2 ☐ Add bleach / chlorine / water guard 3 ☐ Strain through a cloth 4 ☐ Use water filter (ceramic / sand / composite / etc) 5 ☐ Solar disinfection 6 ☐ Let it stand and settle 7 ☐ Other, specify _____ 8 ☐ Don't know
53. What kind of toilet facility do members of your household use? *Kodi mumagwiritsa chimbudzi cha mtundu wanji?* *IF THE HOUSEHOLD HAS A TOILET TAKE A PHOTO* Photo ID _____	1 O Flush toilet **Pit latrine** 2 O Ventilated improved pit latrine 3 O Pit latrine with concrete slab 4 O Pit latrine without concrete slab/open pit 5 O Composting toilet 6 O Bucket toilet 7 O Hanging toilet/hanging latrine 8 O No facility/bush/field ➔ **Q56** 9 O Other_____
54. OBSERVATION ONLY Check if the toilet has a cover.	1 O Cover is present and on 2 O Cover is present but not on 3 O No cover 4 O No permission to see
55. Do you share this toilet facility with other households? *Kodi anthu a mabanja ena amadzagwiritsanso nawo chimbudzi chanuchi?*	1 O Yes 2 O No
56. Please show me where members of your household most often wash their hands *(after the latrine or at any other time)* *Mungandionetseko kumene anthu a pa banja lino amasamba m'manja Kawiri kawiri (pochoka kuchimbudzi kapena nthawi zina)* *IF THE HOUSEHOLD HAS A HAND WASHING FACILITY TAKE A PHOTO* Photo ID _____	1 O Observed a hand washing facility at the location identified by the respondent 2 O Did not observe a hand washing facility, but did observe other hand washing items at the location identified by the respondent (basin, water container, soap, ash, etc) 3 O Did not observe a hand washing facility or any other hand washing items ➔ **Q59** 4 O No permission to see ➔ **Q59**
57. OBSERVATION ONLY Check availability of water at the location identified for hand washing	1 O Water is available 2 O Water is not available 3 O No permission to see

58. OBSERVATION ONLY Check available of soap at the location identified for hand washing *(record all that apply)*	1 ☐ Soap or detergent (bar, liquid, powder or paste) 2 ☐ Ash, mud or sand 3 ☐ None 4 ☐ No permission to see
BED NETS	
59. How many rooms in this household are used for sleeping? (including the living room if used for sleeping) *Kodi pa banja lanuli, ndi zipinda zingati zogona? Onjezerani balaza ngati ena amagonapo*	_____ rooms
60. Does your household have any mosquito nets that can be used while sleeping? *Kodi pa banja lanu pano muli ndi masikito amene mungathe kugwiritsa ntchito pogona?*	1 O Yes 2 O No ➔ **Q63** 3 O Don't know ➔ **Q63**
61. How many mosquito nets does your household have? *Kodi muli ndi masikito angati pa banja lanu lino?*	_____ nets
62. OBSERVATION ONLY Check how many mosquito nets are currently hanging inside the house, ready for sleeping tonight. *TAKE A PHOTO OF ALL HANGING NETS* Photo IDs_____	_____ hanging nets 99 O No permission to see
UNDER 5 CHILD HEALTH	
63. Now I would like to ask about each of your children who are currently under 5 years old. *Tsopano ndikufunsani za ana amene ali ndi zaka zochepera zisanu panopa?* *ONLY INCLUDE CHILDREN WHO ARE CURRENTLY **LIVING IN** THE RESPONDENTS HOUSE. CHECK THAT ALL CHILDREN **UNDER 5** IN **Q20** ARE LISTED IN THIS TABLE.*	

A. Number and name of child under 5 years old from Q20	#___ **Name**_____	#___ **Name**_____	#___ **Name**_____
B. Did (NAME) sleep under a mosquito net last night? *Kodi (dzina) anagona mu masikito usiku wathawu*	1 O Yes 2 O No 3 O Don't know	1 O Yes 2 O No 3 O Don't know	1 O Yes 2 O No 3 O Don't know
C. Has (NAME) had diarrhea in the past 2 weeks? *Kodi (dzina) anadwalapo matenda otsegula m'mimba masabata awiri apitawa?* *PROBE: Specific day and frequency*	1 O Yes 2 O No ➔ **H** 3 O Don't know ➔ **H**	1 O Yes 2 O No ➔ **H** 3 O Don't know ➔ **H**	1 O Yes 2 O No ➔ **H** 3 O Don't know ➔ **H**

D. Did you seek advice or treatment for the diarrhea from any source? *Kodi munakapeza ulangizi kapena thandizo la mankhwala kwina kwake?*	1 O Yes 2 O No ➔ **H**	1 O Yes 2 O No ➔ **H**	1 O Yes 2 O No ➔ **H**
E. Where did you seek advice or treatment? Anywhere else? *Kodi ndi kuti kumene munakalandira ulangizi/thandizo la mankhwala. Palinso kwina?* *(Record all mentioned)*	**Public Sector** 1 ☐ Govt Hospital 2 ☐ Govt Health Centre 3 ☐ Govt Health Post 4 ☐ Mobile Clinic 5 ☐ Village Clinic 6 ☐ HSA 7 ☐ Other public **CHAM/Mission** 8 ☐ Hospital 9 ☐ Health Centre **Private Medical Sector** 10 ☐ Private Hospital / Clinic / Doctor 11 ☐ Pharmacy 12 ☐ Mobile Clinic 13 ☐ Private HSA 14 ☐ Other private 15 ☐ BLM 16 ☐ MACRO 17 ☐ Youth Centre **Other source** 18 ☐ Shop 19 ☐ Traditional 20 ☐ Other, specify ________	**Public Sector** 1 ☐ Govt Hospital 2 ☐ Govt Health Centre 3 ☐ Govt Health Post 4 ☐ Mobile Clinic 5 ☐ Village Clinic 6 ☐ HSA 7 ☐ Other public **CHAM/Mission** 8 ☐ Hospital 9 ☐ Health Centre **Private Medical Sector** 10 ☐ Private Hospital / Clinic / Doctor 11 ☐ Pharmacy 12 ☐ Mobile Clinic 13 ☐ Private HSA 14 ☐ Other private 15 ☐ BLM 16 ☐ MACRO 17 ☐ Youth Centre **Other source** 18 ☐ Shop 19 ☐ Traditional 20 ☐ Other, specify ________	**Public Sector** 1 ☐ Govt Hospital 2 ☐ Govt Health Centre 3 ☐ Govt Health Post 4 ☐ Mobile Clinic 5 ☐ Village Clinic 6 ☐ HSA 7 ☐ Other public **CHAM/Mission** 8 ☐ Hospital 9 ☐ Health Centre **Private Medical Sector** 10 ☐ Private Hospital / Clinic / Doctor 11 ☐ Pharmacy 12 ☐ Mobile Clinic 13 ☐ Private HSA 14 ☐ Other private 15 ☐ BLM 16 ☐ MACRO 17 ☐ Youth Centre **Other source** 18 ☐ Shop 19 ☐ Traditional 20 ☐ Other, specify ________
F. How many days after the diarrhea began did you first seek advice or treatment for (NAME)? *Panatha masiku angati musanakalandire ulangizi komanso thandizo la mankhwala (dzina) chiyambireni kudwala?*	__________ days *(If same day record 0)*	__________ days *(If same day record 0)*	__________ days *(If same day record 0)*
G. Was he/she given a fluid made from a special packet called THANZI or ORS? *Kodi analandilako thanzi ors*	1 O Yes 2 O No 3 O Don't know	1 O Yes 2 O No 3 O Don't know	1 O Yes 2 O No 3 O Don't know
H. Has (NAME) been ill with a fever at any time in the last 2 weeks? *Kodi (dzina) anadwalapo matenda otentha thupi sabata ziwiri zapitazi?* *PROBE: Specific day*	1 O Yes 2 O No 3 O Don't know	1 O Yes 2 O No 3 O Don't know	1 O Yes 2 O No 3 O Don't know

I. Has (NAME) had an illness with a cough at any time in the last 2 weeks? *Kodi (dzina) anadwalako chifuwa nthawi ina yake m'sabata ziwiri zapitazi* *PROBE: Specific day*	1 O Yes 2 O No 3 O Don't know **If H and I both "No" or "Don't Know" ➔ Q64 or next child under 5** **If H "yes" and I "No" or "Don't Know" ➔ L**	1 O Yes 2 O No 3 O Don't know **If H and I both "No" or "Don't Know" ➔ Q64 or next child under 5** **If H "yes" and I "No" or "Don't Know" ➔ L**	1 O Yes 2 O No 3 O Don't know **If H and I both "No" or "Don't Know" ➔ Q64 or next child under 5** **If H "yes" and I "No" or "Don't Know" ➔ L**
J. When (NAME) had an illness with a cough, did he/she breath faster than usual with short, rapid breaths or have difficulty breathing? *Kodi (dzina) amadwala chifuwa chobanika kapena kupuma movutika*	1 O Yes 2 O No ➔ **L** 3 O Don't know ➔ **L**	1 O Yes 2 O No ➔ **L** 3 O Don't know ➔ **L**	1 O Yes 2 O No ➔ **L** 3 O Don't know ➔ **L**
K. Was the fast or difficult breathing due to a problem in the chest or to a blocked or runny nose? *Kodi kudwalaku kunali chifukwa cha matenda a m'chifuwa kapena chifine*	1 O Chest only 2 O Nose only 3 O Both 4 O Other _____ 5 O Don't know	1 O Chest only 2 O Nose only 3 O Both 4 O Other _____ 5 O Don't know	1 O Chest only 2 O Nose only 3 O Both 4 O Other _____ 5 O Don't know
L. Did you seek advice or treatment for the illness from any source? *(fever and/or cough illness)* *Kodi munakapeza ulangizi kapena thandizo la mankhwala kwina kwake?*	1 O Yes 2 O No ➔ **Q64 or next child under 5**	1 O Yes 2 O No ➔ **Q64 or next child under 5**	1 O Yes 2 O No ➔ **Q64 or next child under 5**

M. Where did you seek advice or treatment? Anywhere else? *Kodi ndi kuti kumene munakalandira ulangizi/thandizo la mankhwala. Palinso kwina?* *(Record all mentioned)*	**Public Sector** 1 ☐ Govt Hospital 2 ☐ Govt Health Centre 3 ☐ Govt Health Post 4 ☐ Mobile Clinic 5 ☐ Village Clinic 6 ☐ HSA 7 ☐ Other public **CHAM/Mission** 8 ☐ Hospital 9 ☐ Health Centre **Private Medical Sector** 10 ☐ Private Hospital / Clinic / Doctor 11 ☐ Pharmacy 12 ☐ Mobile Clinic 13 ☐ Private HSA 14 ☐ Other private 15 ☐ BLM 16 ☐ MACRO 17 ☐ Youth Centre **Other source** 18 ☐ Shop 19 ☐ Traditional 20 ☐ Other, specify ___________	**Public Sector** 1 ☐ Govt Hospital 2 ☐ Govt Health Centre 3 ☐ Govt Health Post 4 ☐ Mobile Clinic 5 ☐ Village Clinic 6 ☐ HSA 7 ☐ Other public **CHAM/Mission** 8 ☐ Hospital 9 ☐ Health Centre **Private Medical Sector** 10 ☐ Private Hospital / Clinic / Doctor 11 ☐ Pharmacy 12 ☐ Mobile Clinic 13 ☐ Private HSA 14 ☐ Other private 15 ☐ BLM 16 ☐ MACRO 17 ☐ Youth Centre **Other source** 18 ☐ Shop 19 ☐ Traditional 20 ☐ Other, specify ___________	**Public Sector** 1 ☐ Govt Hospital 2 ☐ Govt Health Centre 3 ☐ Govt Health Post 4 ☐ Mobile Clinic 5 ☐ Village Clinic 6 ☐ HSA 7 ☐ Other public **CHAM/Mission** 8 ☐ Hospital 9 ☐ Health Centre **Private Medical Sector** 10 ☐ Private Hospital / Clinic / Doctor 11 ☐ Pharmacy 12 ☐ Mobile Clinic 13 ☐ Private HSA 14 ☐ Other private 15 ☐ BLM 16 ☐ MACRO 17 ☐ Youth Centre **Other source** 18 ☐ Shop 19 ☐ Traditional 20 ☐ Other, specify ___________
N. How many days after the illness began did you first seek advice or treatment for (NAME)? *Panatha masiku angati*	____________ days *(If same day record 0)*	____________ days *(If same day record 0)*	____________ days *(If same day record 0)*
O. At any time during the illness did (NAME) take any drugs for the illness? *Nthawi imene amadwala, anamwako mankhwala*	1 O Yes 2 O No ➔ **Q64 or next child under 5** 3 O Don't know ➔ **Q64 or next child under 5**	1 O Yes 2 O No ➔ **Q64 or next child under 5** 3 O Don't know ➔ **Q64 or next child under 5**	1 O Yes 2 O No ➔ **Q64 or next child under 5** 3 O Don't know ➔ **Q64 or next child under 5**
P. What drugs did (NAME) take? Any other drugs? *Anamwa mankhwala anji? Palinso ena?* *(Record all mentioned)*	**Antimalarials** 1 ☐ LA 2 ☐ Other antimalarial **Antibiotics** 3 ☐ Pills/syrup 4 ☐ Injection **Other drugs** 5 ☐ Painkillers (aspirin, Panadol, ibuprofen, etc) 6 ☐ Other, specify _________________ 7 ☐ Don't know ➔ **Q64 or next child under 5**	**Antimalarials** 1 ☐ LA 2 ☐ Other antimalarial **Antibiotics** 3 ☐ Pills/syrup 4 ☐ Injection **Other drugs** 5 ☐ Painkillers (aspirin, Panadol, ibuprofen, etc) 6 ☐ Other, specify _________________ 7 ☐ Don't know ➔ **Q64 or next child under 5**	**Antimalarials** 1 ☐ LA 2 ☐ Other antimalarial **Antibiotics** 3 ☐ Pills/syrup 4 ☐ Injection **Other drugs** 5 ☐ Painkillers (aspirin, Panadol, ibuprofen, etc) 6 ☐ Other, specify _________________ 7 ☐ Don't know ➔ **Q64 or next child under 5**
AWARENESS OF HEALTH MESSAGES			

64. A. Have you ever heard that sleeping under a mosquito net can prevent malaria? *Munamvako kuti kugona mu masikito kumateteza malungo?* B. Where did you hear this? Anywhere else? *Munamva kuti? Palinso kwina?*	1 ○ Yes 2 ○ No ➔ **Q65** 1 ☐ Health worker 2 ☐ Radio 3 ☐ Television 4 ☐ Newspaper 5 ☐ Friend/neighbour 6 ☐ Family member 7 ☐ NGO worker 8 ☐ Chief 9 ☐ Other, specify _____
65. A. Have you ever heard that using a toilet can prevent diarrhoea? *Kodi munamvako kuti kugwiritsa ntchito chimbudzi kungathe kuteteza matenda otsegula m'mimba* B. Where did you hear this? Anywhere else? *Munamva kuti? Palinso kwina?*	1 ○ Yes 2 ○ No ➔ **Q66** 1 ☐ Health worker 2 ☐ Radio 3 ☐ Television 4 ☐ Newspaper 5 ☐ Friend/neighbour 6 ☐ Family member 7 ☐ NGO worker 8 ☐ Chief 9 ☐ Other, specify _____
66. A. Have you ever heard that washing your hands can prevent diarrhoea? *Kodi munamvako kuti kusamba m'manja kungathe kuteteza matenda otsegula m'mimba?* B. Where did you hear this? Anywhere else? *Munamva kuti? Palinso kwina?*	1 ○ Yes 2 ○ No ➔ **Q67** 1 ☐ Health worker 2 ☐ Radio 3 ☐ Television 4 ☐ Newspaper 5 ☐ Friend/neighbour 6 ☐ Family member 7 ☐ NGO worker 8 ☐ Chief 9 ☐ Other, specify _____

67. A. Have you ever heard that when your child under 5 years old is sick you should take them to a health centre or village clinic immediately for treatment? *Kodi munamvako kuti mwana wanu wochepera zaka zisanu akadwala mudzimutengera ku chipatala chakumudzi nkapena chachikulupo msangamsanga* B. Where did you hear this? Anywhere else? *Munamva kuti? Palinso kwina?*	1 O Yes 2 O No ➔ **Q68** 1 ☐ Health worker 2 ☐ Radio 3 ☐ Television 4 ☐ Newspaper 5 ☐ Friend/neighbour 6 ☐ Family member 7 ☐ NGO worker 8 ☐ Chief 9 ☐ Other, specify _____
68. A. Have you heard that when you are pregnant you should visit the health centre for check-ups? *Munamvako kuti mukakhala oyembekezera mudzipita ku chipatala kukakuyesani?* B. Where did you hear this? Anywhere else? *Munamva kuti? Palinso kwina?*	1 O Yes 2 O No ➔ **Q69** 1 ☐ Health worker 2 ☐ Radio 3 ☐ Television 4 ☐ Newspaper 5 ☐ Friend/neighbour 6 ☐ Family member 7 ☐ NGO worker 8 ☐ Chief 9 ☐ Other, specify _____
69. Do your religious beliefs prevent you from using some types of modern health care? *Kodi zikhulupiliro za chipembedzo chanu zimakuletsani kutenga nawo mbali kapena kugwiritsa ntchito zina za zaumoyo?*	1 O Yes 2 O No ➔ **Q72** 3 O Don't know ➔ **Q72**
70. What is the name of your religion? *(Record the specific denomination)* *Kodi dzina la mpingo wanu ndi chiyani?*	_____
71. Which types of health care are prohibited according to your religious beliefs? Any others? *Kodi ndi thandizo liti la zaumoyo/chipatala limene mpingo wanu umaletsa? Pali zinanso?*	1 ☐ All types of modern health care 2 ☐ Vaccines 3 ☐ Family planning 4 ☐ Procedures involving blood 5 ☐ Other, specify_____ 6 ☐ Don't know
CHIEF INVOLVEMENT	
72. Has your chief ever spoken to the village about health issues? *Kodi afumu anu anapangitsako msonkhano kapena kulengeza zaumoyo m'mudzi muno?*	1 O Yes 2 O No ➔ **Q74** 3 O Don't know ➔ **Q74**

73. What did they speak to you about? Any other topics? *Kodi msonkhano unali wachiyani kapena analengeza zotani? Pali zinanso za zaumoyo zimene anakamba?* *(record all mentioned)*	1 ☐ Malaria 2 ☐ Latrines 3 ☐ Hand washing 4 ☐ Taking children for treatment 5 ☐ Antenatal care or safe delivery 6 ☐ Family planning 7 ☐ Other_____
74. Are there any by-laws in your village that require households to take an action on health issues? *Kodi m'mudzi mwanu muno muli ndi malamulo opanga nokha oti banja lina lililonse lizitenga mbali pa nkhani ya zaumoyo?*	1 O Yes 2 O No ➔ **Q76** 3 O Don't know ➔ **Q76**
75. What topics are the by-laws on? Any other topics? *Kodi malamulo anuwo ndi okhudza nkhani ziti za zaumoyo/ Palinso zina* *(record all mentioned)*	1 ☐ Malaria 2 ☐ Latrines 3 ☐ Hand washing 4 ☐ Taking children for treatment 5 ☐ Antenatal care or safe delivery 6 ☐ Family planning 7 ☐ Other_____
MALE INVOLVEMENT	
76. Who usually makes decisions about health care for your children? *Kodi ndi ndani kawiri kawiri amapanga chiganizo cha zaumoyo wa ana m'mbanja lanuli?*	1 O Respondent 2 O Husband 3 O Joint decision by couple 4 O Someone else 5 O Other, specify _____
77. Who usually cares for your children when they are ill? *Kodi ndi ndani amasamalira ana kawiri kawiri akamadwala m'banja lanuli?*	1 O Respondent 2 O Husband 3 O Joint decision by couple 4 O Someone else 5 O Other, specify _____
78. Has many times has your husband accompanied you to an antenatal check-up? *Kodi amuna anu anakupelekezaniko kangati ku sikelo ya amai apakati?*	1 O Never 2 O Once 3 O Several times 4 O Every time 5 O No husband 6 O Never been to an antenatal check-up

USE OF GOVERNMENT SERVICES	
79. Which government Health Centre do you use most often? *Kodi kawiri kawiri mumapita chipatala chiti cha boma?*	1 O Katchale Health Centre 2 O Maluwa Health Centre 3 O Chiunjiza Health Centre 4 O Other government health facility, specify _____ 5 O No government health facility ➔ **Q84** 6 O Don't know ➔ **Q84**

80. Do you know which days and hours the Health Centre is open? *Kodi mumadziwa masiku komanso nthawi imene chipatalachi chimakhala chotsegula?*	1 O Yes 2 O No
81. Have you visited the Health Centre in the last 12 months? *Munapitako ku chipatala pa miyezi 12 yapitayi*	1 O Yes 2 O No ➔ **Q83**
82. Overall, how would you rate the services you received at the Health Centre? *Kutengera ndi inu, kodi thandizo la pa chipatala chimene mumapitachi mlotani?*	1 O Poor 2 O Average 3 O Good ➔ **Q84**
83. Why have you not visited the Health Centre in the last 12 months? Any other reason? *Kodi ndi chifukwa chiyani simunapite kuchipatala miyezi 12 yapitayi?* *(Record all mentioned)*	1 ☐ No need to go 2 ☐ Do not know when it is open / concerned it may be closed 3 ☐ Husband would not give permission to go 4 ☐ Not enough money 5 ☐ Long distance 6 ☐ Lack of transport / no money for transport 7 ☐ Not wanting to go alone 8 ☐ Concern that there may not be a female health provider 9 ☐ Concern that there may not be any health provider 10 ☐ Concern that there may be no drugs available 11 ☐ Concern that there may inadequate equipment or supplies 12 ☐ Unhappy with quality of services 13 ☐ Prefer traditional methods 14 ☐ Other reason _____
84. Have you ever personally met the HSA for your village? *Kodi munayamba mwakumanako ndi wa zaumoyo wa m'mudzi mwanu?*	1 O Yes 2 O No 3 O Don't know
85. How many times did the HSA come to your village in the last 12 months? *Kodi ndi kangati kamene wa zaumoyo anabwera m'mudzi mwanumu m'miyezi 12 yapitayi?*	1 O None 2 O Once 3 O Two to three times 4 O Four to six times 5 O More than six times 6 O Don't know
86. Do you have access to a Mobile Clinic where you can take children for vaccinations? *Kodi muli ndi mwayi opita ku sikelo yakumudzi ya ana kukabaitsa katemera?*	1 O Yes 2 O No ➔ **Q92** 3 O Don't know ➔ **Q92**
87. Do you know where the Mobile Clinic is located? *Kodi mukudziwa kumene amapangira sikelo kuno?*	1 O Yes 2 O No

88. Do you know which days and hours the Mobile Clinic is open? *Kodi mukudziwa masiku kapena nthawi imene sikelo imeneyi amapanga?*	1 O Yes 2 O No
89. Have you visited the Mobile Clinic in the last 12 months? *Kodi inuyo munayamba mwapitako ku sikelo imenyi pa miyezi 12 yapitayi?*	1 O Yes 2 O No ➔ **Q91**
90. Overall, how would you rate the services you / your children received at the Mobile Clinic? *Kutengera ndi inu, kodi sikelo imeneyi thandizo lake mumaliona bwanji?*	1 O Poor 2 O Average 3 O Good ➔ **Q92**
91. Why have you not visited the Mobile Clinic in the last 12 months? Any other reason? *Kodi ndi chifukwa chiyani simunapite kusikeloyi pa miyezi 12 yapitayi?* *(Record all mentioned)*	1 ☐ No need to go 2 ☐ Do not know when it is open / concerned it may be closed 3 ☐ Husband would not give permission to go 4 ☐ Not enough money 5 ☐ Long distance 6 ☐ Lack of transport / no money for transport 7 ☐ Not wanting to go alone 8 ☐ Concern that there may not be a female health provider 9 ☐ Concern that there may not be any health provider 10 ☐ Concern that there may be no drugs available 11 ☐ Concern that there may inadequate equipment or supplies 12 ☐ Unhappy with quality of services 13 ☐ Prefer traditional methods 14 ☐ Other reason _____
92. Do you have access to a Village Clinic where you can take sick children under 5 years old for treatment? *Kodi muli ndi mwayi opita ku chipatala chakumudzi?*	1 O Yes 2 O No ➔ **End** 3 O Don't know ➔ **End**
93. Do you know where the Village Clinic is located? *Kodi mukudziwa kumene kuli chipatala chakumudzi kwanu kuno?*	1 O Yes 2 O No
94. Do you know which days and hours the Village Clinic is open? *Kodi mukudziwa masiku kapena nthawi imene chipatalachi amatsekula?*	1 O Yes 2 O No
95. Have you visited the Village Clinic in the last 12 months? *Kodi inuyo munayamba mwapitako ku chipatala chakumudzichi pa miyezi 12 yapitayi?*	1 O Yes 2 O No ➔ **Q97**

96. Overall, how would you rate the services that you / your children received at the Village Clinic? *Kutengera ndi inu, kodi chipatala chimenechi thandizo lake mumaliona bwanji?*	1 ○ Poor 2 ○ Average 3 ○ Good ➔ **End**
97. Why have you not visited the Village Clinic in the last 12 months? Any other reason? *Kodi ndi chifukwa chiyani simunapite kuchipatalachi pa miyezi 12 yapitayi?* *(Record all mentioned)*	1 ☐ No need to go 2 ☐ Do not know when it is open / concerned it may be closed 3 ☐ Husband would not give permission to go 4 ☐ Not enough money 5 ☐ Long distance 6 ☐ Lack of transport / no money for transport 7 ☐ Not wanting to go alone 8 ☐ Concern that there may not be a female health provider 9 ☐ Concern that there may not be any health provider 10 ☐ Concern that there may be no drugs available 11 ☐ Concern that there may inadequate equipment or supplies 12 ☐ Unhappy with quality of services 13 ☐ Prefer traditional methods 14 ☐ Other reason _____

ANNEX B: Enumerator Guide

GENERAL GUIDELINES

Number of responses

- If the response list is marked with a ○ you can only choose **one** answer.
- If the response list is marked with a □ you can choose **more than one** answer.

Marking a response

Tick inside the ○ or □ to mark a response. Do not circle the number next to it. If you make a mistake then cross out the incorrect one and also write an X next to it. Then tick the correct one.

Example below: The enumerator ticked response 1 by accident, and then corrected it to show response 3.

1.	At the time you became pregnant, did you want a child then? *Nthawi imene munakhala ndi mimba imeneyi, munkafuna kukhala ndi mwana?*	1 ✓ Wanted a child then **X** 2 ○ Wanted to wait until later 3 ✓ Did not want any more children

Skipping questions

If there is a ➔ after the response then you should jump to the question number shown if they give that response.

Example below: If the respondent answers "No" or "Unsure" skip to Q24. If the respondent answers "Yes" then continue with Q22.

21.	Are you pregnant now? *Kodi muli ndi mimba panopa?*	1 ○ Yes 2 ○ No ➔ **Q24** 3 ○ Unsure ➔ **Q24**

If there is a ➔ at the bottom of all the responses it means jump to the question shown, regardless of what response they give.

Example below: If the respondent answers "Yes", "No" or "Don't know" you should skip to Q50.

1.	Does your husband / partner know that you are using a method of family planning? *Kodi amuna anu akudziwa kuti mukulera?*	1 ○ Yes 2 ○ No 3 ○ Don't know ➔ **Q50**

Definition of a household

A household is defined as "a group of people who live together, pool their money, and eat at least one meal together each day". A household can include more than one dwelling (e.g. a group of huts) if the dwellings are in the same compound and the members of the household eat together and share money and resources.

Definition of a respondent

The respondent is the woman who is completing the survey. If there is someone sitting nearby (husband, neighbor, mother, etc) and they also answer some of the questions only take the response actually given by the respondent.

Definition of a husband

To avoid confusion by enumerators and participants the word “husband” has been used in all questions, rather than “husband/partner” which was in the original English version. If the woman is unmarried then “husband” can be substituted with “partner” or “boyfriend”.

Definition of a health worker

Some questions ask the respondent whether they heard something from a “health worker”. A health worker includes any individual (doctor, nurse, HSA, patient attendant, guard, janitor, etc) employed in the health sector, including both the government and private health sectors.

Questions where (NAME) is used

Some questions require you to use the name of the child. For example “Is (NAME) a boy or girl?”. This should be done every time to make sure that the respondent does not get confused between different children.

Questions where “Anything else?” is used

For questions that allow more than one answer the enumerator should always probe after the first answer to see if there is anything else. This is shown in the questionnaire using the phrases “Anything else?”, “Any other reason?”, “Anyone else?”, “Anywhere else?”, etc. These probing questions must be asked every time to make sure that the data is as complete as possible.

Questions that ask for the month

If possible use numbers to indicate the month, 01 for January, 02 for February, etc. This will be easier for data entry. If you are not comfortable using numbers then write the name of the month and the supervisor can add the numbers during the review.

If the month is unknown write a question mark (?) to show that the question was not skipped by accident.

Photos

Photo ID numbers from the camera should be written in the spaced indicated on the questionnaire. If the woman does not give permission for you to take a photo then write “No permission” in the Photo ID space.

QUESTION GUIDE

Q1. How old were you at your last birthday?

If the respondent does not know how old she is check the health passport or voter registration. If she does not have these, or they do not include a date of birth, then the enumerator should estimate her age using significant events, the age of her children, and her physical appearance.

Q4. The roof of the main dwelling is predominantly made of what material?

If two or more different types of materials are used for the roof, report the material that is used in the majority.

All questions in the Household Poverty Index

Be careful not to confuse the code numbers with the numerical responses on these questions. The codes are written as numbers, while the responses are written as words.

Example below: If the household has six children under 14 years then the result should look like this:

6. How many household members are 14-years-old or younger? *Kodi muli ndi ana angati a zaka 14 kapena kutsika m'munsi m'mbanja lino?*	0 ✓ Five or more 4 O Four 6 O Three 12 O Two 19 O One 30 O None

Q7. How many household members worked their main activity in the past seven days as a farmer (mlimi)?

You should categorize an individual according to his or her dominant activity. In cases where this cannot be done, you should assign the individual to the activity that is of most economic significance for the household.

Q8. Can the female head read a one-page letter in any language?

Make sure that you are asking about the female head of the household. This is not necessarily the respondent if the respondent is a younger daughter or another woman living in the household. If the female head says she can read a one-page letter *with difficulty* then the answer should still be "Yes".

Q20. Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had.

If the woman has had more than 12 births then take a second questionnaire and staple it to the first one to record all the births.

The most common error on this question is that women will skip the births of children who died. Start by explaining to the woman that this survey will help us to design a program that will prevent the deaths of children, and so it is very important that she provides us with information on children who died. Make sure you probe after she gives you the name of each child (including the first one) to check if there were no additional live births before or after that one.

Stillbirths should not be included in this question. If it is not clear whether the birth was a stillbirth then ask the woman if the baby showed any signs of life after being born (breathing, crying, moving, etc). If there were any signs of life then record it as a live birth.

Q20. A. What was the name given to your (first/next) baby?

Only the first name needs to be written. If the child died before they were given a name write "No name".

Q20. B. Is (NAME) a boy or girl?

This must be asked every time. Do not assume that the child is a boy or girl just because their name sounds masculine or feminine.

Q20 C. In what month and year was (NAME) born?
Q20 E. How old was (NAME) at his/her last birthday?

Both these questions must be asked separately and the answers checked against each other using the Age Table. Also check that the spacing of children's birth dates is not too close together to be biologically possible.

If the respondent does not know how old the child is then check the health passport. If the child does not have a health passport, or it does not include a date of birth, then the enumerator should estimate the child's age using significant events, the age of her other children, and the child's physical appearance.

If the child's age is estimated then the month of birth will not be known. In this case write "Unknown" for the month.

Q20 G. What was the cause of death?

If the woman does not know the specific cause of death, or says it was witchcraft, ask her about the symptoms of the disease in order to place it into a category. If it is not possible to place it into a category then choose "don't know / unclear". If the woman mentions more than one disease ask her which one she thinks actually caused the death.

Neonatal causes include problems during or immediately after delivery, infection, etc. Neonatal causes should only be recorded as a cause for children who died within one month of birth.

Q27. Whom did you see? Anyone else?
Q32. Who assisted with the delivery of (NAME)? Anyone else?
Q38. Who checked on your health at that time? Anyone else?

Many community members cannot tell the difference between types of health workers. If the respondent says they were seen by a doctor, nurse, patient attendant or HSA, check this by asking what color the uniform was.

- Doctor – white
- Nurse – white
- Patient attendant – green
- HSA – sky blue

If the uniform color does not match with what the respondent is saying then use the uniform color to determine the answer.

Q30. How many times did you receive antenatal care during this pregnancy?

If the respondent is unsure then check the health passport. If there is a contradiction between the health passport and what the respondent says verbally then use what the respondent says.

Q31. When (NAME) was born, was he/she very large, larger than average, average, smaller than average, or very small?

If possible check the health passport. An "average" baby is 2.5 - 3.5kg. To identify babies that were "very small" you can also ask if the mother received kangaroo care after giving birth.

Q43. Which method are you using? Any others?
Q44. Since when have you been using (CURRENT METHOD) without stopping?

If the respondent is unsure then check the health passport. If there is a contradiction between the health passport and what the respondent says verbally then use what the respondent says.

If the respondent gives a start date prior to when one of their children was conceived probe to check if they were really using the method continuously since that date, or whether there was a gap when the child was conceived. If they say that they were definitely using the method when the child was conceived then keep the original date.

Q53. What kind of toilet facility do members of your household use?

If they use a pit latrine that is covered by rocks at the top then this should be put under "4 Pit latrine without slab / open pit". Only concrete slabs should be included in "3 Pit latrine with concrete slab".

Q61. How many mosquito nets does your household have?

This includes all mosquito nets that the household has, regardless of their type or how old they are. It includes any mosquito nets that are still in their packets, or mosquito nets that are supposed to be used for sleeping but are actually being used for something else.

Q62. OBSERVATION ONLY Check how many mosquito nets are currently hanging inside the house, ready for sleeping tonight

First ask if the respondent will allow you to take a photo inside the house. If they do not give permission then ask if they can use the camera themselves to take a photo. If they still to not give permission then tick the "no permission to see" box.

A hanging mosquito net is one that is attached to the walls with one or more hooks, in a position that could be used for sleeping. It may be rolled up, but must be able to be unrolled for sleeping.

Examples of mosquito nets that are NOT considered to be "currently hanging inside the house, ready for sleeping tonight" are:

- Nets that are being used as a blanket or a sheet
- Nets that are hanging as curtains on the window
- Nets that are hanging on a clothes line
- Nets that have not been opened and are still inside their plastic wrapper
- Nets that are being used to cover vegetables
- Nets that have no nails or strings attached to them for hanging.
- Nets that have nails or strings attached, but are not currently hanging from one or more nails.

Q63. Now I would like to ask about each of your children who are currently under 5 years old.

Check that all the children under 5 in the birth history are also listed in this table. Make sure you clearly write the name and number of each child at the top of each column, and that the names of the children match the names in the birth history.

If the woman has more than three children under 5 years then take a second survey and staple it to the first one in order to complete these questions for all children under 5.

Q84. Have you ever personally met the HSA for your village?

This question asks whether the respondent has met the HSA for their village face-to-face. If the HSA came to the village but the respondent did not meet them personally then the answer should be “No”. Probe to make sure that the respondent is actually talking about an HSA, and not someone else (e.g. someone from another NGO, or who might have come to do a survey).

ANNEX C: Age Table

	Date of birth	
Year of birth	**Birthday is between 1st Jan and today**	**Birthday is after today or unknown**
1964	50	49
1965	49	48
1966	48	47
1967	47	46
1968	46	45
1969	45	44
1970	44	43
1971	43	42
1972	42	41
1973	41	40
1974	40	39
1975	39	38
1976	38	37
1977	37	36
1978	36	35
1979	35	34
1980	34	33
1981	33	32
1982	32	31
1983	31	30
1984	30	29
1985	29	28
1986	28	27
1987	27	26
1988	26	25
1989	25	24
1990	24	23
1991	23	22
1992	22	21
1993	21	20
1994	20	19
1995	19	18
1996	18	17
1997	17	16
1998	16	15
1999	15	14
2000	14	13
2001	13	12
2002	12	11
2003	11	10
2004	10	9
2005	9	8
2006	8	7
2007	7	6
2008	6	5
2009	5	4
2010	4	3
2011	3	2
2012	2	1
2013	1	0
2014	0	n/a

ANNEX D: Supervisor Guide

Equipment checklist

All enumerators should have:

1. A raincoat
2. Plastic pouch
3. Pen x 2
4. Camera and case
5. Spare batteries for camera
6. Ink pad

The supervisor should have:

- Questionnaires
- Samsung phone for GPS
- Plastic pouch
- Ink for ink pads
- Spare pens
- Spare batteries for cameras
- Village sample sheet
- Auditing sheets

Questionnaire numbering

10 questionnaires must be completed for each village (10 questionnaires X 100 villages = 1000 questionnaires). The supervisor should pre-fill the village and questionnaire number before giving the questionnaires to the enumerators. The questionnaire number should start with the number of the village on the village sample sheet, and end with the number of the questionnaire.

For example: Village #1 on the sample sheet is Njovu. Questionnaires for this village should be numbered 101, 102, 103, etc. Village #76 on the sample sheet is Mbalani. Questionnaires for this village should be numbered 7601, 7602, 7603, etc.

Village level data

The supervisor must collect the following data for every village, unless it is already available on the village sample sheet:

- Latitude and Longitude from the GPS app on Samsung camera
- Approximate number of households
- Approximate number of chiefs
- GVH

For information regarding number of households and chiefs ask the Village Headman, or if they are not available ask community members. Figures do not need to be 100% accurate, just approximate numbers.

Permission to survey

Start by seeking permission from the chief to do the survey in the village. If the chief does not give permission then choose the next closes village.

If a village cannot be surveyed due to a funeral, cultural event, or because people are busy in the fields come back on another day. If it still cannot be surveyed on the next day then choose the next closest village.

Questionnaire review

The supervisor must review every questionnaire to make sure that:

- All pages and questions are complete
- The correct questions have been skipped
- The birth history is consistent (number of births listed matches total number of births)
- The date of birth and age of all children match
- In the child health section the number of children under 5 years matches the number of children under 5 years in the birth history
- Photo IDs are filled for the respondent and all necessary questions

Once the review has been completed the supervisor must sign on the front of the questionnaire and tick “review”.

Questionnaire audit

The supervisor must choose 1 questionnaire from each village (1 in 10 = 10%) to audit. To audit the questionnaire the supervisor must return to the household and ask 10 randomly selected questions again (more if necessary) to confirm that the data is accurate. In addition, the birth history section must always be audited.

The questions asked should be recorded on the Questionnaire Audit form, along with the results. The number of the questionnaire audited and the result must be recorded on the village sample form.

ANNEX E: Auditing Form

QUESTIONNAIRE AUDIT REPORT

Supervisor name _____

Questionnaire Details

Questionnaire #	
Village	
Enumerator	

Questions Audited

#	Question #	Results
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11	Q20 Birth history	

Signature: Date:

ANNEX F: Data Entry Auditing Form

DATA ENTRY AUDIT REPORT

Supervisor name _____

Questionnaire Details

Questionnaire #	
Keyed by	

Questions Audited – Main

#	Question #	Results
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Questions Audited – Children

#	Child ID	Question #	Results
1			
2			
3			

Signature: Date:

ANNEX G: Sampling Frame

Katchale Health Centre

#	Village Name	Station	GVH	TA	Latitude	Longitude
1	Katchale	Mlodzenzi	Chizumba	Chadza	-14.28357	33.90967
2	Mwatengeza	Mlodzenzi	Mkakaula	Chadza	-14.28496	33.90542
3	Maliseche	Mlodzenzi	Mkakaula	Chadza	-14.28147	33.90636
4	Chizumba	Mlodzenzi	Chizumba	Chadza	-14.26784	33.91249
5	Mwanja	Mlodzenzi	Chizumba	Chadza	-14.27189	33.91269
6	Mbangali	Mlodzenzi	Chizumba	Chadza	-14.27258	33.91217
7	Mankhokwe	Mlodzenzi	Chizumba	Chadza	-14.2707	33.9123
8	Yelemasi	Mlodzenzi	Chizumba	Chadza	-14.27851	33.91021
9	Khombe	Mlodzenzi	Chizumba	Chadza	-14.27053	33.91289
11	Kokolo	Chinthu	Mbalame	Chadza	-14.2627	33.89225
12	Kumpola	Chinthu	Mbalame	Chadza	-14.26127	33.89154
13	Mtima	Chinthu	Mbalame	Chadza	-14.26602	33.89172
14	Guliguli	Chinthu	Mbalame	Chadza	-14.26787	33.8944
15	Chimutu	Chinthu	Mbalame	Chadza	-14.27291	33.89452
16	Kabiswala	Chinthu	Mkakaula	Chadza	-14.27268	33.90242
17	Champha	Chinthu	Mkakaula	Chadza	-14.27412	33.90287
18	Mkakaula	Chinthu	Mkakaula	Chadza	-14.27579	33.90359
19	Kazangazika	Chinthu	Mkakaula	Chadza	-14.27877	33.90359
20	Chilamba	Namikango	Chinthankhwa	Chadza	-14.30885	33.9194
21	Nzeluzatha	Namikango	Chinthankhwa	Chadza	-14.30885	33.91853
22	Veremu	Namikango	Chinthankhwa	Chadza	-14.31064	33.91895
23	Mphako	Namikango	Chinthankhwa	Chadza	-14.30998	33.9197
24	Jamu	Namikango	Chinthankhwa	Chadza	-14.30614	33.91867
25	Chinthankhwa	Namikango	Chinthankhwa	Chadza	-14.30249	33.92113
27	Malimbwe	Namikango	Malimbwe	Chadza	-14.29602	33.93008
28	Chidede	Namikango	Chinthankhwa	Chadza	-14.29722	33.91847
30	Kazonga	Namikango	Kazonga	Chadza	-14.30066	33.90518
31	Nkonalino	Chiphwanya	Chiphwanya	Chiseka	-14.31621	33.86969
32	Mazengera	Chiphwanya	Chiphwanya	Chiseka	-14.31515	33.87558
33	Kapeya	Chiphwanya	Chiphwanya	Chiseka	-14.3149	33.87591
34	Masiketi	Chiphwanya	Chiphwanya	Chiseka	-14.31384	33.87664
35	Chitenje	Chiphwanya	Chiphwanya	Chiseka	-14.31411	33.87708
36	Chiphwanya	Chiphwanya	Chiphwanya	Chiseka	-14.31285	33.87724
37	Tsibwi	Chiphwanya	Chiphwanya	Chiseka	-14.31269	33.87757
38	Msanyama	Chiphwanya	Chiphwanya	Chiseka	-14.31244	33.87792
39	Mphandule	Chiphwanya	Chiphwanya	Chiseka	-14.31852	33.87807
40	Kapazira	Chiphwanya	Kalongosola	Chiseka	-14.3016	33.88212
41	Kalongosola	Chiphwanya	Kalongosola	Chiseka	-14.30009	33.8803
42	Mcholo	Chiphwanya	Kalongosola	Chiseka	-14.29923	33.87861
43	Bisiwasi	Chiphwanya	Bisiwasi	Chiseka	-14.29936	33.87939
44	Tsogolani	Chiphwanya	Bisiwasi	Chiseka	-14.29942	33.87782
45	Mzumazi	Chiphwanya	Phula	Chadza	-14.30879	33.88663
46	Zilaka	Chiphwanya	Phula	Chadza	-14.30794	33.88538
47	Paliminga	Chiphwanya	Phula	Chadza	-14.30756	33.8893
48	Kaphamtengo	Chiphwanya	Phula	Chadza	-14.30687	33.88983
49	M'dangwe	Chiphwanya	Phula	Chadza	-14.30119	33.89563
50	Malembo	Chiphwanya	Phula	Chadza	-14.30215	33.89494

#	Village Name	Station	GVH	TA	Latitude	Longitude
51	Phula	Chiphwanya	Phula	Chadza	-14.30352	33.89332
52	Nyalubwe	Chiphwanya	Phula	Chadza	-14.29901	33.89338
53	Chingondo	Chiphwanya	Phula	Chadza	-14.28943	33.89607
54	Msampha	Chiphwanya	Phula	Chadza	-14.29536	33.89581
55	Pwitika	Nyamazani	Pwitika	Chadza	-14.2823	33.91873
56	Pwitika kumchenga	Nyamazani	Pwitika	Chadza	-14.27782	33.92638
57	Chamtupira	Nyamazani	Mkute	Chadza	-14.27698	33.92888
58	Mtiza	Nyamazani	Mkute	Chadza	-14.27809	33.93148
59	Kalindiyani	Nyamazani	Mdabwi	Chadza	-14.27968	33.93611
60	Namtsetse	Nyamazani	Mkute	Chadza	-14.27673	33.93842
61	Dzanjalimodzi	Nyamazani	Nyamazani	Chadza	-14.27673	33.94097
63	Kansampha	Nyamazani	Pwitika	Chadza	-14.28929	33.94366
64	Gwirize	Nyamazani	Pwitika	Chadza	-14.29377	33.93964
65	Mbalamekankhande	Kalumbi Mthira	Mkute	Chadza	-14.27207	33.93888
66	Kalulu	Kalumbi Mthira	Mkute	Chadza	-14.27229	33.93981
67	Tonde	Kalumbi Mthira	Nyamazani	Chadza	-14.27154	33.93586
69	Chatupa	Kalumbi Mthira	Mkute	Chadza	-14.25734	33.93705
70	Mkute	Kalumbi Mthira	Mkute	Chadza	-14.25599	33.94027
71	Mbalamemthira	Kalumbi Mthira	Kalumbi	Kalumbu	-14.25397	33.93723
72	Nankhombo	Kalumbi Mthira	Kalumbi	Kalumbu	-14.25464	33.93235
73	Mdabwikutchemba	Kalumbi Mthira	Mdabwi	Chadza	-14.27749	33.91822
75	Kadzakatha	Kalumbi Mthira	Kalumbi	Kalumbu	-14.23892	33.94294
76	Chilombo	Mponda Khuzi & Chilembwe	Chilembwe	Kalumbu	-14.22782	33.93827
77	Mgombensanga	Mponda Khuzi & Chilembwe	Mgombe	Chadza	-14.23113	33.91174
78	Mgombechikho	Mponda Khuzi & Chilembwe	Chilembwe	Kalumbu	-14.23422	33.92331
80	Njovu	Mponda Khuzi & Chilembwe	Chilembwe	Kalumbu	-14.23031	33.93646
81	Jontcho	Mponda Khuzi & Chilembwe	Chilembwe	Kalumbu	-14.23346	33.92756
82	Khuzi	Mponda Khuzi & Chilembwe	Khuzi	Kalumbu	-14.2229	33.9404
83	Kamangadazi	Mponda Khuzi & Chilembwe	Khuzi	Kalumbu	-14.22242	33.94423
84	Nsema	Mponda Khuzi & Chilembwe	Khuzi	Kalumbu	-14.22084	33.9455
85	Mwamtsindo	Mponda Khuzi & Chilembwe	Khuzi	Kalumbu	-14.2192	33.94522
86	Mtengo	Mponda Khuzi & Chilembwe	Khuzi	Kalumbu	-14.21348	33.94687
87	Pimbiri	Mponda Khuzi & Chilembwe	Khuzi	Kalumbu	-14.21481	33.94066
88	Mnyontho	Mponda Khuzi & Chilembwe	Khuzi	Kalumbu	-14.21718	33.92592
89	Chimatiro	Mponda Khuzi & Chilembwe	Khuzi	Kalumbu	-14.21637	33.92712
90	Kambandule	Mponda Khuzi & Chilembwe	Khuzi	Kalumbu	-14.21752	33.91608
91	Mgadamika	Chimphanga	Kalumbi	Kalumbu	-14.24313	33.9284
92	Mkata	Chimphanga	Kalumbi	Kalumbu	-14.24344	33.92373
93	Mchindiuza	Chimphanga	Chizumba	Chadza	-14.25025	33.91894
94	Katsokomola	Chimphanga	Chizumba	Chadza	-14.25417	33.91462
95	Mtibu	Chimphanga	Chizumba	Chadza	-14.25732	33.91449

#	Village Name	Station	GVH	TA	Latitude	Longitude
96	Chimphanga	Chimphanga	Chimphanga	Chadza	-14.2496	33.91153
97	Kasengwa	Chimphanga	Mbalame	Chadza	-14.25023	33.89967

Maluwa Health Centre

Stations

Without village clinic	
H.S.A / Station	**Selected**
P.Jolosi	YES
Mbalame	YES
A.Mankhwanzi	YES
D.Mphika	NO
Chadabwa	NO
Tsekwere	NO
E.Kapulula	NO
H.Kampila	NO
J.Chagomelanal	NO
C.Kamkolowola	NO

With Village Clinic	
H.S.A / Station	**Selected**
G.Maloni	YES

Villages

#	Name of Village	Station
1	Mbalame	Mbalame
2	Mtembe	Mbalame
3	Masula	Mbalame
4	Kapachika	Mbalame
5	Mankhukwa	Mbalame
6	Masoafira	Mbalame
7	Chilalo	Mbalame
8	Chikumba	Mbalame
9	Kamanga	G.Maloni
10	Chilanga	G.Maloni
11	Chidambaila	G.Maloni
12	Msambainfa	G.Maloni
13	Mdzapule	G.Maloni
14	Mwachilala	G.Maloni
15	Chipwika	G.Maloni
16	Phula	G.Maloni
17	Chipeni	A.Mankhwanzi
18	Kumchenga	A.Mankhwanzi
19	Sayela	A.Mankhwanzi
20	Mkela	A.Mankhwanzi
21	Chapata	A.Mankhwanzi

#	Name of Village	Station
22	Kulifuwu	A.Mankhwanzi
23	Nkhuku	A.Mankhwanzi
24	Market	A.Mankhwanzi
25	Pitala	A.Mankhwanzi
26	Chidzondo	A.Mankhwanzi
27	Kachono	A.Mankhwanzi
28	Mwadzungu	A.Mankhwanzi
29	Chibweza	A.Mankhwanzi
30	Mtema	A.Mankhwanzi
31	Mdondwe	A.Mankhwanzi
32	Mdzeka	A.Mankhwanzi
33	Chikhasu	A.Mankhwanzi
34	Mphunzi	A.Mankhwanzi
35	Masula	A.Mankhwanzi
36	Chikumba	P.Jolosi
37	Gooke	P.Jolosi
38	Chakuta	P.Jolosi
39	Mnthambwe	P.Jolosi
40	Mchonkhwe	P.Jolosi
41	Mfuti	P.Jolosi
42	Mkeche	P.Jolosi
43	Chioko	P.Jolosi
44	Petro	P.Jolosi
45	Zakalia	P.Jolosi
46	Katembo	P.Jolosi
47	Mkapha	P.Jolosi
48	Mbalame	P.Jolosi
49	Kaliati	P.Jolosi
50	Santhe	P.Jolosi
51	Dzamalala	P.Jolosi

Chiunjiza Health Centre

Stations

Without village clinic	
H.S.A	**Selected**
P Kabvuta	YES
PM Kwenda	YES
Vacant 2	NO
P Malasila	NO
BM Mavuto	NO
K Onsewa	NO
Vacant 1	NO
A Dumbo	NO

With Village Clinic	
H.S.A	**Selected**
Vacant 3	YES
J Msonthi	YES
MO Menga	NO
Msema	NO

Villages

#	Name of Village	Station
1	Yalumba	P Kabvuta
2	Mawaka	P Kabvuta
3	Chiunjiza 2	P Kabvuta
4	Chigaga	P Kabvuta
5	Dzalanyama camp	P Kabvuta
6	Mlekeza	P Kabvuta
7	Mchinjika	P Kabvuta
8	Robert	P Kabvuta
9	Mapezi	P Kabvuta
10	Mdakaziona	P Kabvuta
11	Chiunjiza 1	P Kabvuta
12	Ksande	PM Kwenda
13	Kumchetsa	PM Kwenda
14	Fusani	PM Kwenda
15	Mtalimanja	PM Kwenda
16	Dambolachepa	PM Kwenda
17	Tambala	PM Kwenda
18	Bokosi	Vacant 3
19	Chikuduleni	Vacant 3
20	Chamkoma	Vacant 3
21	Kasiya	Vacant 3
22	Zilikha	Vacant 3
23	Galuanenenji	Vacant 3
24	Mtayeni	Vacant 3
25	Mtema	Vacant 3

#	Name of Village	Station
26	Miwanga T/C	Vacant 3
27	Chalongelera	Vacant 3
28	Nezala	Vacant 3
29	Mbulanda	Vacant 3
30	Chipwhanya	J Msonthi
31	Dzoole	J Msonthi
32	Mtukulo	J Msonthi
33	Mnyasei	J Msonthi
34	Beni	J Msonthi
35	Malanga	J Msonthi
36	Chimtengo	J Msonthi
37	Mapulesi	J Msonthi
38	Kankhungwa	J Msonthi
39	Chasowa	J Msonthi
40	Chewire	J Msonthi
41	Mbofani	J Msonthi

ANNEX H: Sampled Villages

Village #	Type	Health Centre	Village Name	Station	Village Clinic	GVH	TA	Latitude	Longitude	Approx. # Households	Approx. # Chiefs
1	Intervention	Katchale	Katchale	Mlodzenzi	No	Chizumba	Chadza	-14.28357	33.90967	250	3
2	Intervention	Katchale	Mwatengeza	Mlodzenzi	No	Mkakaula	Chadza	-14.28496	33.90542	19	3
3	Intervention	Katchale	Maliseche	Mlodzenzi	No	Mkakaula	Chadza	-14.28147	33.90636	79	7
4	Intervention	Katchale	Mbangali	Mlodzenzi	No	Chizumba	Chadza	-14.27258	33.91217	66	2
5	Intervention	Katchale	Yelemasi	Mlodzenzi	No	Chizumba	Chadza	-14.27851	33.91021	17	1
6	Intervention	Katchale	Khombe	Mlodzenzi	No	Chizumba	Chadza	-14.27053	33.91289	10	1
7	Intervention	Katchale	Mtima	Chinthu	No	Mbalame	Chadza	-14.26602	33.89172	26	2
8	Intervention	Katchale	Guliguli	Chinthu	No	Mbalame	Chadza	-14.26787	33.8944	25	1
9	Intervention	Katchale	Chimutu	Chinthu	No	Mbalame	Chadza	-14.27291	33.89452	76	4
10	Intervention	Katchale	Kabiswala	Chinthu	No	Mkakaula	Chadza	-14.27268	33.90242	15	1
11	Intervention	Katchale	Champha	Chinthu	No	Mkakaula	Chadza	-14.27412	33.90287	25	1
12	Intervention	Katchale	Kazangazika	Chinthu	No	Mkakaula	Chadza	-14.27877	33.90359	13	3
13	Intervention	Katchale	Veremu	Namikango	Yes	Chinthankhwa	Chadza	-14.31064	33.91895	16	1
14	Intervention	Katchale	Mphako	Namikango	Yes	Chinthankhwa	Chadza	-14.30998	33.9197	7	1
15	Intervention	Katchale	Jamu	Namikango	Yes	Chinthankhwa	Chadza	-14.30614	33.91867	6	1
16	Intervention	Katchale	Malimbwe	Namikango	Yes	Malimbwe	Chadza	-14.29602	33.93008	32	6
17	Intervention	Katchale	Chidede	Namikango	Yes	Chinthankhwa	Chadza	-14.29722	33.91847	54	2
18	Intervention	Katchale	Kazonga	Namikango	Yes	Kazonga	Chadza	-14.30066	33.90518	150	13
19	Intervention	Katchale	Kapeya	Chiphwanya	Yes	Chiphwanya	Chiseka	-14.3149	33.87591	9	1
20	Intervention	Katchale	Kapazira	Chiphwanya	Yes	Kalongosola	Chiseka	-14.3016	33.88212	35	1
21	Intervention	Katchale	Bisiwasi	Chiphwanya	Yes	Bisiwasi	Chiseka	-14.29936	33.87939	10	3
22	Intervention	Katchale	Kaphamtengo	Chiphwanya	Yes	Phula	Chadza	-14.30687	33.88983	15	2

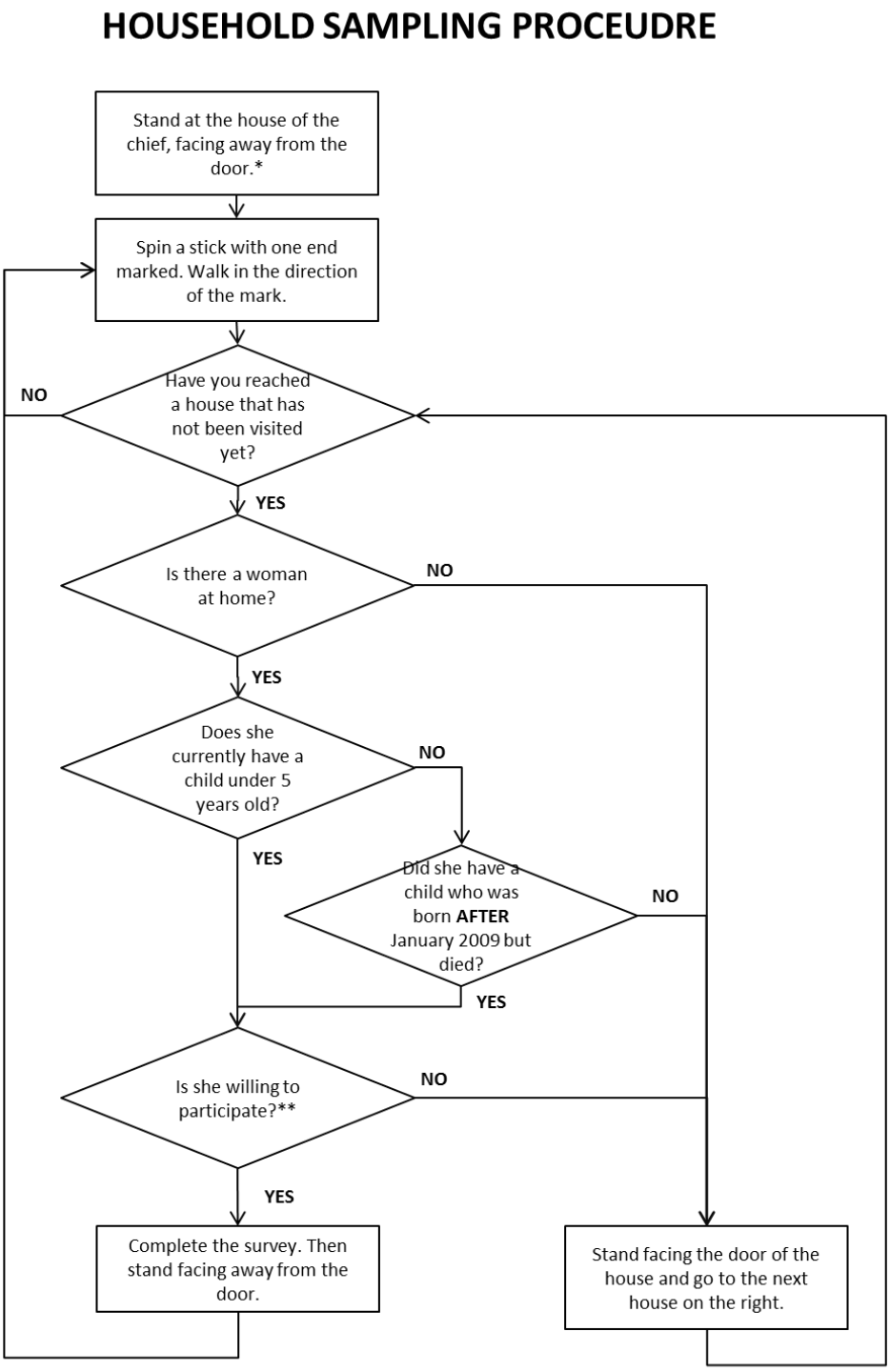
Village #	Type	Health Centre	Village Name	Station	Village Clinic	GVH	TA	Latitude	Longitude	Approx. # Households	Approx. # Chiefs
23	Intervention	Katchale	M'dangwe	Chiphwanya	Yes	Phula	Chadza	-14.30119	33.89563	17	2
24	Intervention	Katchale	Phula	Chiphwanya	Yes	Phula	Chadza	-14.30352	33.89332	54	4
25	Intervention	Katchale	Pwitika	Nyamazani	No	Pwitika	Chadza	-14.2823	33.91873	34	2
26	Intervention	Katchale	Nyemba	Nyamazani	No	Pwitika	Chadza			44	1
27	Intervention	Katchale	Chamtupira	Nyamazani	No	Mkute	Chadza	-14.27698	33.92888	22	2
28	Intervention	Katchale	Mtiza	Nyamazani	No	Mkute	Chadza	-14.27809	33.93148	33	3
29	Intervention	Katchale	Kalindiyani	Nyamazani	No	Mdabwi	Chadza	-14.27968	33.93611	12	1
30	Intervention	Katchale	Dzanjalimodzi	Nyamazani	No	Mkute	Chadza	-14.27673	33.94097	28	1
31	Intervention	Katchale	Mbalamekankhande	Kalumbi Mthira	No	Mkute	Chadza	-14.27207	33.93888	14	1
32	Intervention	Katchale	Kalulu	Kalumbi Mthira	No	Mkute	Chadza	-14.27229	33.93981	20	1
33	Intervention	Katchale	Tonde	Kalumbi Mthira	No	Nyamazani	Chadza	-14.27154	33.93586	18	1
34	Intervention	Katchale	Chatupa	Kalumbi Mthira	No	Mkute	Chadza	-14.25734	33.93705	13	1
35	Intervention	Katchale	Mkute	Kalumbi Mthira	No	Mkute	Chadza	-14.25599	33.94027	19	3
36	Intervention	Katchale	Nankhombo	Kalumbi Mthira	No	Kalumbi	Kalumbu	-14.25464	33.93235	15	1
37	Intervention	Katchale	Njovu	Khuzi & Chilembwe	Yes	Chilembwe	Kalumbu	-14.23031	33.93646	58	1
38	Intervention	Katchale	Jontcho	Khuzi & Chilembwe	Yes	Chilembwe	Kalumbu	-14.23346	33.92756	120	2
39	Intervention	Katchale	Kamangadazi	Khuzi & Chilembwe	Yes	Khuzi	Kalumbu	-14.22242	33.94423	25	3
40	Intervention	Katchale	Nsema	Khuzi & Chilembwe	Yes	Khuzi	Kalumbu	-14.22084	33.9455	85	2
41	Intervention	Katchale	Mnyontho	Khuzi & Chilembwe	Yes	Khuzi	Kalumbu	-14.21718	33.92592	14	1

Village #	Type	Health Centre	Village Name	Station	Village Clinic	GVH	TA	Latitude	Longitude	Approx. # Households	Approx. # Chiefs
42	Intervention	Katchale	Kambandule	Khuzi & Chilembwe	Yes	Khuzi	Kalumbu	-14.21752	33.91608	10	1
43	Intervention	Katchale	Mgadamika	Chimphanga	No	Kalumbi	Kalumbu	-14.24313	33.9284	11	1
44	Intervention	Katchale	Mkata	Chimphanga	No	Kalumbi	Kalumbu	-14.24344	33.92373	25	4
45	Intervention	Katchale	Mchindiuza	Chimphanga	No	Chizumba	Chadza	-14.25025	33.91894	45	3
46	Intervention	Katchale	Katsokomola	Chimphanga	No	Chizumba	Chadza	-14.25417	33.91462	10	1
47	Intervention	Katchale	Chimphanga	Chimphanga	No	Chimphanga	Chadza	-14.2496	33.91153	35	5
48	Intervention	Katchale	Kasengwa	Chimphanga	No	Mbalame	Chadza	-14.25023	33.89967	25	3
49	Control	Chiunjiza	Yalumba	P Kabvuta	No	Yalumba	Masula	-14.40124	33.65008	142	4
50	Control	Chiunjiza	Mawaka	P Kabvuta	No	Chigaga	Masula	-14.37392	33.65192	24	2
51	Control	Chiunjiza	Chiunjiza 2	P Kabvuta	No	Chiunjiza	Masula	-14.40558	33.66862	152	13
52	Control	Chiunjiza	Chigaga	P Kabvuta	No	Chigaga	Masula	-14.38922	33.63916	24	4
53	Control	Chiunjiza	Dzalanyama camp	P Kabvuta	No	Mayepzi	Masula	-14.40989	33.62205	25	1
54	Control	Chiunjiza	Mlekeza	P Kabvuta	No	Yalumba	Masula	-14.40125	33.65007	18	1
55	Control	Chiunjiza	Ksande	PM Kwenda	No	Wande	Masula	-14.39431	33.68623	33	4
56	Control	Chiunjiza	Kumchetsa	PM Kwenda	No	Kumchetsa	Masula	-14.38781	33.71715	341	9
57	Control	Chiunjiza	Fusani	PM Kwenda	No	Kumchetsa	Masula	-14.38535	33.72314	27	2
58	Control	Chiunjiza	Mtalimanja	PM Kwenda	No	Kumchetsa	Masula	-14.39704	33.70282	6	1
59	Control	Chiunjiza	Dambolachepa	PM Kwenda	No	Kumchetsa	Masula	-14.39532	33.70385	37	4
60	Control	Chiunjiza	Tambala	PM Kwenda	No	Tambala	Masula	-14.38978	33.70813	31	2
61	Control	Chiunjiza	Bokosi	Vacant 3	Yes	Kasiy	Masula	-14.38504	33.65907	14	1
62	Control	Chiunjiza	Chikuduleni	Vacant 3	Yes	Chalongelora	Masula	-14.37707	33.65719	38	1
63	Control	Chiunjiza	Chamkoma	Vacant 3	Yes	Chankoma	Masula	-14.37054	33.63836	53	10
64	Control	Chiunjiza	Kasiya	Vacant 3	Yes	Kasiya	Masula	-14.38072	33.66387	34	3
65	Control	Chiunjiza	Zilikha	Vacant 3	Yes	Chaloengelera	Masula	-14.37061	33.65275	44	5
66	Control	Chiunjiza	Galuanenenji	Vacant 3	Yes	Chankoma	Masula			39	3

Village #	Type	Health Centre	Village Name	Station	Village Clinic	GVH	TA	Latitude	Longitude	Approx. # Households	Approx. # Chiefs
67	Control	Chiunjiza	Chipwhanya	J Msonthi	Yes	Chipwhanya	Masula			41	3
68	Control	Chiunjiza	Dzoole	J Msonthi	Yes	Dzoole	Masula			49	
69	Control	Chiunjiza	Mtukulo	J Msonthi	Yes	Mtukulo	Masula			91	
70	Control	Chiunjiza	Mnyasei	J Msonthi	Yes	Chipwhanya	Masula	-14.37545	33.73724	29	
71	Control	Chiunjiza	Beni	J Msonthi	Yes	Beni	Masula	-14.38134	33.75455	107	7
72	Control	Chiunjiza	Malanga	J Msonthi	Yes	Mbofana	Masula	-14.36709	33.78007	81	4
73	Control	Maluwa	Mbalame	Mbalame	No	Mbalame	Chadza	-14.26971	33.88537	26	1
74	Control	Maluwa	Chilalo	Mbalame	No	Mbalame	Chadza	-14.26424	33.887	250	11
75	Control	Maluwa	Chikumba	Mbalame	No					40	3
76	Control	Maluwa	Masula	Mbalame	No						
77	Control	Maluwa	Kapechika	Mbalame	No	Mbalame	Chadza	-14.26412	33.88699	18	1
78	Control	Maluwa	Mtemba	Mbalame	No	Mbalame	Chadza	-14.26691	33.88699	34	1
79	Control	Maluwa	Chipwika	G.Maloni	Yes			-14.20559	33.85479		
80	Control	Maluwa	Miniaizi	G.Maloni	Yes			-14.31613	33.87218		
81	Control	Maluwa	Mwachilala	G.Maloni	Yes						
82	Control	Maluwa	Kadula	G.Maloni	Yes	Mwiniduzi	Chiseka			16	1
83	Control	Maluwa	Chidambaila	G.Maloni	Yes						
84	Control	Maluwa	Kamgange	G.Maloni	Yes						
85	Control	Maluwa	Sayela	A.Mankhwanzi	No		Chadza	-14.24323	33.8625	28	1
86	Control	Maluwa	Chapita	Esnart	No	Mantchidsi	Chadza			26	1
87	Control	Maluwa	Mdzeka	A.Mankhwanzi	No	Mdzeka	Chadza	-14.22317	33.86267	27	4
88	Control	Maluwa	Chaponda	Esnart	No	Mantchidsi	Chadza	-14.2832	33.86237	28	1
89	Control	Maluwa	Kumchenga	A.Mankhwanzi	No						
90	Control	Maluwa	Pitala	A.Mankhwanzi	No			14.2198	33.87931		
91	Control	Maluwa	Santhe	P.Jolosi	No						
92	Control	Maluwa	Chakuta	P.Jolosi	No			-14.23945	33.88038		

Village #	Type	Health Centre	Village Name	Station	Village Clinic	GVH	TA	Latitude	Longitude	Approx. # Households	Approx. # Chiefs
93	Control	Maluwa	Mnthambwe	P.Jolosi	No			-14.23944	33.88037		
94	Control	Maluwa	Zakalia	P.Jolosi	No			-14.2205	33.88641		
95	Control	Maluwa	Katembo	P.Jolosi	No			-14.20974	33.8938		
96	Control	Maluwa	Petro	P.Jolosi	No			-14.22051	33.8864		

ANNEX I: Household Sampling Flowchart



* If it is a large village with more than one chief enumerators should start at different chief houses.
** If there is more than one eligible woman willing to participate then spin the stick. Choose the one standing closest to where the mark is pointing.

ANNEX J: Sample Size Calculations

The following sample size calculations were completed by the consultant team prior to the implementation of the baseline survey. Initially a sample of 500 households in the intervention and control areas (1000 households in total) was recommended.

However, this was changed to 480 in both areas (960 households in total) after the team decided that it was important to stratify the sample by HSA station. Since there are 8 HSA stations in Katchale this meant that the final sample size must be divisible by 8. It also allowed the survey to fit within the time and budget available.

Sample size calculation (option 1) (3)

The sample size was further determined using the following formula:

$$n/group = \frac{\left(Z_{\frac{\alpha}{2}}\sqrt{2\overline{pq}} + Z_{\beta}\sqrt{p_2q_2 + p_1q_1}\right)^2}{(p_2 - p_1)^2}$$

$$n/group = \frac{\left(1.96\sqrt{2(0.125)(0.875)} + 1.282\sqrt{(0.15)(0.85) + (0.10)(0.90)}\right)^2}{(0.0596)^2}$$

- **n/group** $= \left[\frac{1.332181966)}{0.0596}\right]^2 = 499.6 = 500.$
- **n/group = 500.** Thus, = 500 per group will provide **90%** power of test to detect a difference of at least **5.96% between groups with assumption of prevalence of at least 10% in one group and 15% in another group** and using 2-sided α of 0.05.
- **n/group = 500**, (sample size from program area = **500** and non-program area = **500**)
- **Total sample size (n) for 2 group** = **500** * **2** = 1000
  = **1000**

Where,

- $Z_{\frac{\alpha}{2}}$ (95% confidence level) is **1.96**
- **P_1** (estimated proportion of program area) is **0.15 (15%)**; and **q_1** is **0.85 (85%)**
- **P_2** (estimated proportion of non-program area) is **0.10 (10%)**; **and q_2** is **0.9 (90%)**
- **P_{pool}** (estimated proportion of $\left[\frac{P1+P2)}{2}\right] = \left[\frac{0.15+0.10}{2}\right]$ **is 0.125 (12.5%)**; and **q_{pool}** is **0.875 (87.5%)**
- Z_{β} - is the power of test at **90%** (0.9023), but **z = 1.282.**
- $(p_2 - p_1)^2$ -is the proportion difference between proportion (p_1) one and proportion (p_2) two is **0.0596**(5.596%).

Sample size calculation (option 2)

The sample size was further determined using the following formula:

$$n/group = \frac{\left(Z_{\frac{\alpha}{2}}\sqrt{2\bar{p}\bar{q}} + Z_{\beta}\sqrt{p_2q_2 + p_1q_1}\right)^2}{(p_2 - p_1)^2}$$

$$n/group = \frac{\left(1.96\sqrt{2(0.5)(0.5)} + 1.282\sqrt{(0.5)(0.5) + (0.5)(0.5)}\right)^2}{(0.102519325)^2}$$

- **n/group** = $\left[\frac{1.385929291+0.906510893}{0.102519325}\right]^2 = \left[\frac{2.292440184}{0.102519325}\right]^2$ = 500.02 = **500**.
- **n/group = 500.** Thus, = 500 per group will provide **90% power of test** to detect a difference of at least **10.25% between two groups** using 2-sided α of 0.05.
- **n/group = 500**, (sample size from program area = **500** and non-program area = **500**
- **Total sample size (n) for 2 groups** = **500** * **2** = 1000
  = **1000**

Where,

- $Z_{\frac{\alpha}{2}}$ (95% confidence level) is **1.96**
- **P** (estimated proportion) is **0.5** and, hence **q** is also **0.5**. The **p** is assumed to be **0.5 (50%)** to **maximize sample size per each study group** (program group and non-program group) due to **unknown proportions of study variables which were identified by qualitative survey**. **Hence**, p_2; p_1; q_1 or q_2 are all each **0.5**.
- Z_{β} - is the power of test at **90%** (0.9023), but **z = 1.282.**
- $(p_2 - p_1)^2$-is the proportion difference between proportion (p_1) one and proportion (p_2) two is **0.1025** (10.25%).

ANNEX K: Call for Proposals

TERMS OF REFERENCE

INTER AIDE CHILD HEALTH PROGRAM

BASELINE SURVEY

Background

Inter Aide, a French international NGO, has been running a child health program in the central region of Malawi since 1991. Initially the project was focused on providing screening and rehabilitation for malnourished children. However, as the rate of malnutrition has declined it expanded into other health issues affecting children under five years, including the prevention of diarrhea and malaria.

The design of the project requires the catchment area to move every year. In 2013 the project is operating in 25 villages in the catchment areas of Chadza, Maluwa and Katchale Health Centers.

A review of the program completed in mid-2013 found that many of the activities were not well linked with government activities, and in some cases were duplicating government activities. In addition, while the project has made a significant impact on some behaviors such as latrine construction, women have identified barriers to certain health behaviors that can only be addressed by working more closely with the government (e.g. for family planning, safe delivery, access to village clinics etc).

In response to the challenges identified with the current program, Inter Aide has decided to develop a new pilot program that is more closely linked with government services. The program will aim to address barriers to healthy behaviors at both the family and the system level. If the pilot program is successful it may become the new strategy for the whole child health program.

The initial pilot program design has been based on a qualitative problem tree analysis by representatives from the community, Health Centre, Traditional Authority and Area Development Committee. The pilot program is summarized in the table below.

Project Title	Reducing morbidity and mortality among children under five years old in the Katchale Health Centre catchment.
Target Area & Beneficiaries	The project will be implemented in all villages within the catchment area of Katchale Health Centre, which is located within Mitundu Health Area in Lilongwe district. The total number of villages identified is currently 97, although this may change after review by the HSAs working at the facility. The total population of the catchment was previously estimated by the Health Centre to be 19,835, including 3,372 children under five years and 4,562 women of reproductive age (15-49 years). However, an accurate population will only be known after initial house-by-house visits early in 2014.
Duration	The project will run for a minimum of three years, from 2014 to 2016. It may be extended if necessary depending on the results from the first three years.
Goal	The goal of the project is to reduce the number of children under five years old, including neonates, who get and/or die from preventable diseases.

Objectives	4. To increase the number of children receiving early diagnosis and/or treatment for common diseases (e.g. LA, ORS, etc). 5. To increase the number of parents implementing prevention behaviours (e.g. ITNs, latrines, hand washing, etc). 6. To reduce the number of complications during pregnancy and birth (e.g. prematurity, infection etc) through increasing antenatal care, safe delivery and family planning.
Partners and stakeholders	• Katchale Health Centre • Mitundu Health Area • Lilongwe District Health Office • Chadza, Kalumbu and Chiseka Traditional Authorities, including the Group Village Headmen and Village Headmen under them • Chadza, Kalumbu and Chiseka Area Development Committees, including the Village Development Committees under them
Approach	The project will be divided into community level activities and system level activities. Community activities will be implemented within each village and will directly involve men, women, children and chiefs. The main aim of these activities will be to improve health related behaviours of parents. System activities will be implemented with the government health staff and will focus on improving the services available at Katchale Health Centre for children under 5 years and pregnant women.

Purpose

A baseline survey for this pilot project is required for two reasons. The first is to validate the problems identified during the problem tree analysis. The analysis was purely qualitative and so a quantitative survey is required to confirm the real scale of the problems.

The second reason for conducting a baseline survey is that the evaluation of the project will be done using a baseline and endline survey in both intervention and control villages. The baseline survey will be conducted in January 2014 and the endline survey will be conducted three years later in January 2017.

Methodology

Design

A quasi-experimental design will be used for the baseline and endline survey. This means that both villages in the program area, as well as control villages in non-program areas will be surveyed. The non-program areas will include the catchments of at least three Health Centres that are similar to Katchale Health Centre and also managed by Mitundu Health Area. The exact Health Centres to be used are still being selected. They will be chosen to be as close as possible to Katchale Health Centre in terms of size, remoteness and service level.

The reason for selecting control villages from more than one other Health Centre is that there are several other NGOs working in Mitundu Health Area. Unfortunately there is no central list of all the NGO programs, and their catchment areas change regularly. Selecting control villages from multiple Health Centres will minimise the risk that all control villages are being impacted by the program of another NGO.

Sampling

Village sampling

Two-stage cluster sampling will be used. In the first stage 50 villages will be randomly selected from the intervention area and 50 villages from the control areas. The aim is to maximize the number of primary sampling units (villages) as per the UN Guidelines on Household Surveys[7], while still keeping the number of villages to be visited manageable.

In the intervention area villages will be selected using simple random sampling (using a random number generator) from the list of 97 known villages, excluding seven of the villages that were included in the 2013 catchment (Chilembwe, Chinthu, Choma, Kalumbi, Kapezawanthu, Mdabwi, and Nyamazani). An accurate population of each village could not be provided by the Health Centre, and so a probability proportional to size sampling method cannot be used.

In the control areas there is no complete list of villages available. Even in Katchale Health Centre the Health Centre AEHO was only able to identify 40 of the villages in their catchment, while GPS mapping by Inter Aide identified 97. Therefore it is not possible to randomly select the control villages from a list. Instead, random GPS coordinates will be generated within the catchment areas of the control Health Centres. The closest village to the random GPS coordinates will be the one selected.

Household sampling

Within each village 10 households will be selected using a random walk quota method. This will give a total of 500 households in the intervention areas and 500 in the control areas. This should be sufficient to detect a difference in proportions of at least 15% at 95% power.[8] A difference of less than 15% on key indicators (e.g. child morbidity, latrine coverage, hand-washing, etc) would be too small to have a meaningful impact for beneficiaries and so it is not necessary to measure at that level.

To select the households the enumerator will stand at the house of the chief and spin a stick with an arrow on one end. They will walk in the direction of the arrow until they reach a house. If there is a woman of reproductive age in the house (15-49 years) who has at least one child under 5 years old they will proceed with the survey (if she is willing). If not they will stand facing the door of the house and go to the next house on the right. They will continue going right until they reach a house that has an eligible woman in it who is willing to complete the survey.

Once a household completes a survey they will mark a cross in chalk on the door of the house and spin the stick again to choose a new direction. They will also spin again if they reach the edge of the village or arrive back at a house that has already been visited. This process will be continued until 10 eligible households have been surveyed from the village. If the village does not have 10 eligible households then the nearest village will be used to complete the remaining households.

The same villages will be used for the baseline survey endline surveys, and where possible the same households will also be surveyed (longitudinal design). This is recommended by the UN Guidelines on Household Surveys for surveys that will only be done twice. If the survey will be done more than twice then the recommendation is to rotate households so that not all households are surveyed repeatedly.

Instrument

[7] UN Department of Economic and Social Affairs Statistic Division. Designing Household Survey Samples: Practical Guidelines. Available at http://unstats.un.org/unsd/demographic/sources/surveys/Handbook23June05.pdf

[8] Conroy, R. Sample size: A rough guide. Chapter 1.3 Sample sizes for studies comparing proportions between two groups.

The survey questionnaire is still being developed. The same questionnaire will be used for the baseline survey endline survey, although sections may be excluded from the endline survey if they are considered no longer relevant (for example if the baseline survey shows that knowledge on bed nets is already at 100% this question may not be asked again).

The questionnaire will include sections on the following issues:

1. Demographics of participants
2. Questions to validate the following problems identified during the problem tree analysis:
    a. Knowledge of key health information
    b. Chief involvement in health issues
    c. Beliefs, myths and misconceptions
    d. Male involvement in health issues
    e. Awareness of services available
    f. Satisfaction with health services
    g. Poverty level (using the Progress Out of Poverty™ index)
3. Questions to measure the following indicators that will be used to evaluate the program:
    a. Indicators for the Goal:
        i. Under 5 mortality in the 5 years preceding the survey
        ii. Infant mortality in the 5 years preceding the survey
        iii. Neonatal mortality in the 5 years preceding the survey
        iv. Prevalence of fever in children under 5 years in the last 2 weeks
        v. Prevalence of diarrhoea in children under 5 years in the last 2 weeks
        vi. Prevalence of Acute Respiratory Infection (ARI) symptoms in children under 5 years in the last 2 weeks
    b. Indicators for Outcome 1:
        i. Percentage of children with fever for whom advice or treatment was sought from a health facility or provider
        ii. Percentage of children with fever who received antimalarial drugs
        iii. Percentage of children with diarrhoea for whom advice or treatment was sought from a health facility or provider
        iv. Percentage of children with diarrhoea who received Oral Rehydration Salts (ORS) or pre-packaged liquid
        v. Percentage of children with Acute Respiratory Symptoms (ARI) for whom advice or treatment was sought from a health facility or provider
    c. Indicators for Outcome 2:
        i. Percentage of households using any type of toilet/latrine
        ii. Percentage of households with a functioning hand washing facility
        iii. Percentage of children under 5 years old who slept under any bed net last night
    d. Indicators for Outcome 3:
        i. Percentage of pregnant women attending at least one antenatal check-up
        ii. Percentage of deliveries at a health facility
        iii. Percentage of pregnant women attending at least one postnatal check-up within 24 hours of birth
        iv. Percentage of pregnancies that are unplanned
        v. Unmet need for family planning

The questions used to measure each indicator have been matched to the 2010 Malawi Demographic Health Survey (MDHS) to align with national statistics.

It is expected that the final questionnaire will take a **maximum of 45 minutes** to complete per participant (only 30 minutes if possible).

Data collection

Data collection will be performed by a team of trained enumerators who have experience with health surveys and have completed tertiary education (e.g. nurses who have experience working on demographic and health surveys). The enumerators will be independent and hired specifically for this purpose. The team of enumerators will be supervised by an independent supervisor in addition to the Inter Aide Health Coordinator and Program Manager.

Quality control

After completing each survey the enumerator will give the survey to their supervisor who will review it for completeness. If any information is missing they will ask the enumerator to return to the household to complete it. The supervisor will randomly choose 10% of surveys to audit. The audit will involve returning to the household and asking at least 10 questions again to verify that the answers in the survey are correct.

Completed surveys will be entered into a spread sheet or database. The supervisor will randomly choose 10% of surveys to audit. This will involve comparing the figures in the spread sheet or database with the original hard copy survey for all survey questions.

Data analysis

Data analysis will be conducted using a statistical package and standard statistical tests. Statistically significant results will be those with $p<.05$.

Ethics

The purpose of this survey is for quality improvement rather than scientific research, and it has minimal risks. According to the ARECCI Ethics Screening Tool it does not require ethics committee approval.[9]

All participants will be required to give informed consent before participating in the survey. This will be done with a thumb print on the consent form. The woman completing the survey may choose to stop the survey at any time.

The name of the woman completing the survey and her children will be on the hard copy survey form that will be stored in a locked room. Their names will not be entered into the master spread sheet, only their unique ID numbers, to protect their privacy during data analysis. A separate spread sheet will be kept linking their ID numbers with names.

Limitations

There are several limitations to the proposed methodology. The first is that the population of villages is unknown and so sampling cannot be done proportional to size. This means that the final sample may have a bias towards households in smaller villages which have a higher chance of being selected than households in larger villages.

The use of a random walk quota sampling method for choosing households within villages also has limitations. There may be a difference between households who are not at home during the time of the survey compared to those that are at home. For example, households who are not at home may

[9] ARECCI Ethics Screening Tool. Available at: http://www.aihealthsolutions.ca/arecci/misunderstandings.php

be more likely to be lower income, and may not be home because they are doing piecework or working as a tenant in another area.

It is also likely that some households may move out of the area between the baseline and endline, and so it may not be possible to follow-up 100% of the baseline survey households.

Deliverables

The final deliverables for the baseline survey will be:

- One raw data set in .csv or .xls format containing all the raw data from the surveys.
- One baseline survey report.

Timeline

Field work for the survey will be completed in January 2014. Data entry and analysis must be completed by the end of February 2014.

Budget

The budget submitted by the independent consultant should include all costs **except** for the following items, which will be provided by Inter Aide:

- Three enumerators to assist the team of enumerators provided by the Contractor
- Fuel and transport for the Contractor and their staff
- Refreshments for one briefing meeting
- Stationary and photocopying
- Equipment required by enumerators (pens, plastic document covers, rain coat jackets, etc)
- Data entry for all surveys
- Assistance with analysis
- Report writing for the first draft of the report

The budget should be itemized so that costs for each stage of the survey (data collection, data entry, analysis and report writing) can be seen separately.

ANNEX L: Consultant Contract

INTER AIDE CHILD HEALTH PROGRAM
BASELINE SURVEY

Contracting Authority	**Inter Aide**	
	Address:	P.O. Box 31405, Lilongwe 3
	Tel:	+265 997 519 734
	E-mail:	interaide.health.LL@gmail.com
Contractor	**Phiri, Chirwa & Chauwa Survey Consultants**	
	Address:	P.O. Box 1274, Lilongwe
	Tel:	+265 999 203 449
	E-mail:	phiriwilliamprecious@yahoo.com

ARTICLE 1. SUBJECT

1.1. The Inter Aide Child Health Program in Lilongwe district is a program to reduce morbidity and mortality among children under 5 years old.

1.2. The subject of the contract shall be the baseline survey for the Inter Aide Child Health Program, which will be conducted by the Contractor following the Terms of Reference in **ANNEX A** and the Contractor's proposal in **ANNEX B** between **January 2014** and **February 2014**.

ARTICLE 2. LAW APPLICABLE AND OFFICIAL LANGUAGE

2.1. The contract shall in all respects be construed and interpreted in accordance with the Malawian Law. The Parties shall make every effort to settle amicably any dispute that may arise between them. Once a dispute has arisen, the Parties shall notify each other in writing of their positions on the dispute and any solution that they consider possible.

2.2. The contract and all written communications between the Parties will be drafted in English.

ARTICLE 3. PRICE AND TERMS OF PAYMENT

3.1. The price of the Project to be paid to the Contractor is **1,050,000.00 kwacha** (One million and fifty thousand kwacha). The contract price shall be paid by cheque to the individual who signs this contract on behalf of the Contractor.

3.2. The payments shall be made in three instalments as follows:

1) **105,000.00 kwacha** (one hundred and five thousand kwacha), equal to the **10%** of the total contract amount, after completing the briefing and pre-testing.

2) **630,000.00 kwacha** (six hundred and thirty thousand kwacha), equal to the **60%** of the total contract amount, after all data collection is complete.

3) **315,000.00 kwacha** (three hundred and fifteen thousand kwacha), equal to the **30%** of the total contract amount, after completion of data analysis and peer review of the final report.

3.3. The price referred to in Article 3.1 above shall be the sole remuneration owed by the Contracting Authority to the Contractor under the contract. It is a fixed price and shall not be subject to revision. The price is inclusive of VAT and all other taxes. The Contractor is responsible for paying all relevant taxes.

ARTICLE 4. GENERAL OBLIGATIONS

4.1. The Contractor shall perform the contract with due care and diligence including, where specified, the design, manufacture, delivery to site, erecting, testing and commissioning of the supplies and carrying out of any other work including the remedying of any defects in the supplies. The Contractor shall also provide all necessary equipment, supervision, labor and facilities required for the performance of the contract except the items specified in **Article 5.2**.

4.2. The Contractor shall respect and abide by all laws and regulations in force in the state of the Contracting Authority and shall ensure that his personnel, their dependents, and his local employees also respect and abide by all such laws and regulations. The Contractor shall indemnify the Contracting Authority against any claims and proceedings arising from any infringement by the Contractor, his employees and their dependents of such laws and regulations.

4.3. The Contractor shall treat all documents and information received in connection with the contract as private and confidential. He shall not, save in so far as may be necessary for the purposes of the contract's execution, publish or disclose any particulars of the contract without the prior consent in writing of the Contracting Authority. If any disagreement arises as to the necessity for any publication or disclosure for the purpose of the contract, the decision of the Contracting Authority shall be final.

4.4. The Contractor is responsible for insuring their own equipment and for providing their own health insurance. The Contracting Authority will not be held liable for any damage to the Contractor's equipment regardless of cause, or any injury to the Contractor during activities related to the project.

4.5. The Contractor must provide evidence that all government employees working as sub-contractors have taken official annual leave from their duties on days when they are sub-contracting.

4.6. The Contracting Authority will provide equipment for the Contractor to use, including but not limited to, rain coat jackets and digital cameras. All equipment must be returned to Inter Aide in working condition. If any equipment is lost, damaged or stolen when in use by the Contractor the value of the replacement item will be deducted from the Contractor's fee.

ARTICLE 5. WORK PLAN, DELIVERABLES AND EXECUTION

5.1. The Contractor must draw up detailed work plan and produce deliverables following **ANNEX A** and **ANNEX B**. All activities shall follow the work plan as agreed by the two parties. The final deliverables are:

- One raw data set in .csv or .xls format containing all the raw data from the surveys.
- One baseline survey report.

5.2. To assist with the implementation of the baseline survey Inter Aide will provide the following resources to support the Contractor:

- Three enumerators to assist the team of five enumerators provided by the Contractor
- Fuel and transport for the Contractor and their staff
- Refreshments for one briefing meeting
- Stationary and photocopying

- Equipment required by enumerators (pens, plastic document covers, rain coat jackets, digital camera etc)
- Data entry for all surveys
- Assistance with analysis
- Report writing for the first draft of the report

ARTICLE 6. BREACH OF CONTRACT AND TERMINATION

6.1. A Party shall be in a breach of contract if it fails to discharge any of its obligations under the contract. This includes if the Contractor fails to produce work of the quality required by the Contracting Authority.

6.2. Where a breach of contract occurs, the injured Party shall be entitled to the following remedies: a) damages; and/or b) termination of the contract.

6.3. The Contracting Authority may, after giving the Contractor seven days' notice, terminate the contract if the Contractor substantially fails to perform his obligations under this contract or in any other instance in which the Contractor refuses or neglects to carry out administrative orders given by the Contracting Authority.

6.4. Neither Party shall be considered to be in default or in breach of its obligations under the contract if the performance of such obligations is prevented by any event of force majeure (by which it is meant acts of God, strikes, lock-outs or other industrial disturbances, acts of the public enemy, wars whether declared or not, blockades, insurrection, riots, epidemics, landslides, earthquakes, storms, lightning, floods, washouts, civil disturbances, explosions and any other similar unforeseeable events which are beyond the Parties' control and cannot be overcome by due diligence) arising after the date of notification of award or the date when the contract becomes effective, whichever is the earlier.

The Contracting Authority and the Contractor affirm to know, understand and agree the following articles of the contract as together negotiated.

Contracting Authority (Inter Aide)	**Contractor (Phiri, Chirwa & Chauwa Survey Consultants)**
Name: Piroska Bisits Bullen	*Name:*
Position: Program Manager	*Position:*
Signature:	*Signature:* .....
Date:	*Date:* .....

This contract is printed and signed in 2 (two) copies, one of which should be retained by the Contractor.

ANNEX A: See attached baseline survey Terms of Reference

ANNEX B: See attached contractor proposal

ANNEX M: Data Collection Team

Enumerators

Inter Aide

Christopher Masina

Lesta Phiri

Gertrude Kalirangwe

Consultants

Burton Saiwala

Benson Chidaomba

Moses Enoch

Jenkins Banda

Ignatius Liphuka

Supervisors

Inter Aide

Piroska Bisits Bullen

Consultants

Precious Phiri

Sam Chirwa

Lloyd Chauwa

ANNEX N: PPI Lookup Table

Use the following look-up tables to convert PPI scores to the poverty likelihoods below each of the poverty lines.

PPI Score	National (%)	Food (%)	USAID 'Extreme' (%)	1993 PPP $1.08/day (%)	1993 PPP $2.16/day (%)
0-4	100.0	78.8	78.8	78.8	100.0
5-9	95.2	60.2	60.2	67.0	100.0
10-14	95.5	63.9	70.9	71.9	97.8
15-19	88.9	60.2	65.5	68.3	96.7
20-24	82.5	40.8	48.7	49.9	94.3
25-29	70.0	30.8	35.8	38.2	89.4
30-34	59.3	20.1	24.5	28.1	83.2
35-39	47.8	12.0	14.8	17.2	74.0
40-44	36.1	6.6	8.4	10.7	61.2
45-49	25.5	3.5	4.4	6.0	48.9
50-54	13.4	2.0	2.7	3.6	36.5
55-59	7.1	0.9	1.3	2.1	21.4
60-64	3.9	0.0	0.5	0.5	13.0
65-69	0.9	0.0	0.0	0.0	5.2
70-74	0.0	0.0	0.0	0.0	5.8
75-79	2.2	0.0	0.0	0.0	2.2
80-84	0.0	0.0	0.0	0.0	2.6
85-89	0.0	0.0	0.0	0.0	10.4
90-94	0.0	0.0	0.0	0.0	10.4
95-100	0.0	0.0	0.0	0.0	0.0

PPI Score	2005 PPP $1.25/day (%)	2005 PPP $2.50/day (%)
0-4	100.0	100.0
5-9	100.0	100.0
10-14	99.2	100.0
15-19	97.5	100.0
20-24	96.3	99.8
25-29	91.2	99.4
30-34	86.8	99.3
35-39	77.5	98.7
40-44	67.8	95.5
45-49	56.0	94.2
50-54	41.5	90.0
55-59	24.3	77.4
60-64	17.0	68.6
65-69	8.0	50.0
70-74	5.8	39.4
75-79	2.2	29.3
80-84	2.6	26.1
85-89	10.4	19.1
90-94	10.4	19.1
95-100	0.0	0.0