



**TUBE POKA CHILD SURVIVAL PROJECT
CHITIPA DISTRICT, MALAWI**



**FINAL KPC SURVEY REPORT
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Victor Kabaghe, WR Malawi Child Survival Project Manager
Richard Thindwa, WR Malawi Child Survival Project Deputy Manager
Sarah Borger, WR Maternal and Child Health Specialist
Melanie Morrow, WR Director of Maternal and Child Health Programs

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ACRONYMS

ACT	Artemisinin Combination Therapy (also referred to as LA in Malawi)
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal care
ART	Antiretroviral Therapy
BCG	Bacille Calmette-Guerin
CATCH	Core Assessment Tool on Child Health
CG	Care Group
CGV	Care Group Volunteer
C-HIS	Community Health Information System
C-IMCI	Community Integrated Management of Childhood Illness
CS	Child Survival
CSP	Child Survival Project
DHMT	District Health Management Team
DHS	Demographic Health Survey
DPT	Diphtheria, Pertussis, Tetanus
EBF	Exclusive Breast Feeding
EHP	Essential Health Care Package
EOP	End of Project
EPI	Expanded Program on Immunization
GMC	Growth Monitoring Counseling
HC	Health Center
HF	Health Facility
HSA	Health Surveillance Assistants
IMCI	Integrated Management of Childhood Illness
IPTp	Intermittent Presumptive Therapy during pregnancy
ITN	Insecticide Treated Net
KPC	Knowledge, Practice and Coverage
HIV	Human Immunodeficiency Virus
MOH	Ministry of Health
ORT	Oral Rehydration Therapy
ORS	Oral Rehydration Solution
PMTCT	Prevention of Mother to Child Transmission of HIV
PSI	Population Services International
SP	Sulfadoxine- Pyrimethamine
STI	Sexually Transmitted Infection
TBA	Traditional Birth Assistant
TT	Tetanus Toxoid
UNICEF	United Nations Infants and Children's Fund
USAID	United States Agency for International Development
VCT	Voluntary Counseling and Testing
WHO	World Health Organization
WR	World Relief

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I. EXECUTIVE SUMMARY

In July 2009, The World Relief (WR) Tube Poka Child Survival Team conducted a Final KPC survey in the project area Chitipa District, Malawi. The survey was designed to assess the knowledge and practices of mothers of children 0-23 months in diarrheal disease control, malaria control, pneumonia, infant and young child feeding, immunization coverage, growth monitoring, birth spacing and HIV/AIDS. The Baseline questionnaire was modified at the time of the Midterm and this same modified questionnaire was repeated at the Final with the alteration of the sustainability question for great detail. A 30 cluster survey methodology used to select the respondents and the results analyzed using EpiInfo software.

This project has met or exceeded the following indicator targets:

- Percentage of caretakers of children 0-23m who know at least two childhood illness danger signs for seeking care immediately
- Percentage of children 0-23m with diarrhea in the previous two weeks who received Oral Rehydration Therapy (ORT) (home available fluids, ORS, or breastfeeding)
- Percentage of children 0-5m who were exclusively breastfed during the last 24 hours
- Percentage of children 6-9m who received breastmilk and complementary foods during the last 24 hours
- Percentage of mothers with children age 0-23m who cited at least two known ways of reducing the risk of HIV infection
- Percentage of children age 0-23m whose births were attended by skilled health personnel

II. BACKGROUND

World Relief's *Tube Poka* Child Survival Project operated within the Chitipa District of Malawi from 2006 to 2009. The population of Chitipa is primarily rural, with an estimated total population of 174,786 people scattered over the mountains in 475 villages. The beneficiary population of 89,974 is comprised of 49,773 children under five (9,413 children less than 12 months, 8,335 children 12-23 months, and 14,277 children 24-59 months) and 40,201 women ages 15-49 years².

Chitipa's residents are diverse, with approximately 15 ethnic groups speaking 17 different dialects. Chitipa is predominantly Christian (96%), with the highest illiteracy rate (33%) of the six northern districts³. Differential household food distribution favors males, putting mothers and female children at increased risk of malnutrition. Malaria, pneumonia and diarrhea remain public health threats particularly to children in Chitipa. According to the 2004 Demographic Health Survey (DHS), disease burden attributable to malaria is over 36%, and case fatality rate is 50% higher than the national average⁴.

Chitipa District is further from the capital city than any other district in Malawi and is among the most isolated. Over 50% of households in Chitipa have to walk more than 30 minutes to a safe water source⁵. The poor infrastructure hampers potential areas of development in the district; the road to the district capital is not paved, access to internet services is currently available but unreliable, power cuts for all of Chitipa Township are frequent, and the water supply system at the District Township has also had difficulties. However, installation of power lines has extended to southern corridor (Ntahlire and Wenya) and Misuku areas giving more opportunities for Information Technology installations. The District Assembly, World Relief and one recent Internet Cafe, have established satellite internet connections during the life of this project.

National Standards and Policies

Health Services: Malawi's formal health system includes government run health centers which provide family planning, safe motherhood, environmental health, immunization, disease prevention, antenatal care (ANC), and growth monitoring and counseling (GMC) at no cost to users. Malawi's MOH and UNICEF promote an essential health care package (EHP) focusing on common illnesses and equitable to the poor using a sector wide approach. It emphasizes insecticide treated net (ITN) distribution and use, increased access to prompt treatment within 24 hours for children with suspected malaria and pneumonia, and increased access to intermittent preventative treatment (IPTp) for pregnant women. In addition to regional health centers, there is one District Hospital that provides more advanced care including Antiretroviral Therapy (ART) and Prevention of Mother to Child Transmission of HIV (PMTCT), and 148 community based Health Surveillance Assistants (HSA) for health education and limited treatment.

Health Information System: Surveillance data are reported monthly by the HSAs to health facilities which in turn submit monthly reports to the District Statistician for inclusion in the District database. Copies of the compiled data are sent monthly to a central database. Surveillance reports are collated quarterly and circulated to local, regional and national MOH authorities, as well as shared with HSAs, community leaders and Village Health Committees to inform decision-making, responses to outbreaks, etc. A gamut of health information is collected, including inpatient and outpatient services, community based data, personnel status and movement, and stock-outs for essential drugs. Reporting data includes delivery outcomes, expanded program on immunization (EPI), sexually transmitted infections (STI), cholera, and general morbidity and mortality data. However, areas not covered by HSAs do not have up to date information, and outreach immunization data is not accurate due to staff shortages. Moreover, household level data is largely unavailable.

Immunizations: Malawi's Expanded Program on Immunization follows child vaccination guidelines set forth by the World Health Organization (WHO). A child is considered fully vaccinated if she or he has received one BCG vaccine, three DPT and polio vaccines, and one measles vaccine. DPT and polio vaccines are given at approximately 6, 10, and 14 weeks of age. The measles vaccine should be given at or soon after the child reaches nine months of age. The Malawi EPI recommends that children the complete schedule of vaccinations before 12 months of age. Polio vaccine at or around birth is being promoted, although it is not yet widely practiced in Malawi. Vaccinations are provided at health centers and while there are frequent health outreach campaigns they rarely include vaccinations.

Nutrition: The Malawi Ministry of Health is a strong promoter of exclusive breastfeeding (EBF) for the first six months of life and continued breastfeeding with appropriate complementary feeding up to two years or beyond. This policy applies to all children unless there are medical indications, in line with the UNICEF and WHO Global Strategy on Infant and Young Child Feeding.⁶ In addition, it is MOH policy to supplement children age 6-59 months with a Vitamin A capsule once every six months. Distribution of Vitamin A occurs most frequently at twice annual health outreach campaigns. During this time the District Health Management Team (DHMT) has specifically not requested mothers to bring vaccination cards as it may dissuade those who do not own cards.

Policy on Malaria: In 2008, the MOH changed its policy on malaria treatment to combination therapy due to high resistance to anti-malarial drugs in the country. Following this change previous malaria medication was removed from the HSAs' drug kits with plans for training and restocking with the new treatment. However, the training and subsequent restocking has yet to take place resulting in a lack of available treatment at the community level. The MOH recommends two doses of IPTp with SP during pregnancy and they provide ITNs for free, but this distribution is limited due to shortages in supplies.

HIV/AIDS: Voluntary Counseling and Testing (VCT) sites are available at all health centers (HC) in Chitipa. ART and PMTCT services are available at the District Hospital.

Diarrhea Prevention and Treatment: The Ministry of Health emphasizes on the promotion of safe water uptake and appropriate hygiene practices. Their policy recommends hand washing at five critical times using the model of the hand where the thumb represents washing hands after using the toilet, the index finger represents hand washing after changing baby's nappies, the middle finger represents washing hands before handling food and before breast feeding, the ring finger represents washing hands before cooking, and the small finger before eating food. The policy also emphasizes on the construction and usage of a pit latrine and a hand washing facility. With regards to treatment of diarrhea, the policy recommends that care takers use ORT and or any available homemade fluids while taking the child to health facility.

Overview of the Care Group Model

The *Tuba Poka* project uses a modified version Care Group Model and partners with the District MOH, the Department of Social Welfare, and 362 local churches. Over 3,000 Care Group Volunteers (CGV) are organized into Care Groups (CG) of approximately ten volunteer members, providing the functional units for training, management and health information. Each CGV is given responsibility for ten households, until every house with a child under five years of age or women of reproductive age in the village is covered by a volunteer. The CGVs visit each of their ten households every two weeks to share health lessons, check on the health of their children and build relationships. World Relief developed the Care Group strategy in Mozambique, but this is the first child survival project to involve local churches as community-based organizations in direct implementation of care groups in the hope of providing for even greater sustainability beyond previously published successes^{7,8}.

Program Goals and Objectives

There were three overall strategic objectives of the *Tube Poka* project:

- Strengthen the capacity of Chitipa District’s health system to implement Child Survival and Health interventions according to Integrated Management of Childhood Illness (IMCI) protocols.
- Develop sustainable community-based mechanisms to improve prevention and care-seeking practices for childhood illnesses at the household and community level.
- Improve coverage and utilization rates of malaria control strategies according to Roll Back Malaria guidelines.

Table 8 Intervention Mix and Level of effort

Intervention Mix	Level of Effort
Malaria Prevention and Case Management	30%
Nutrition	20%
Control of Diarrheal Diseases	20%
Immunization	15%
Pneumonia Case Management	10%
HIV/AIDS Prevention	5%

All of the planned interventions have been implemented with exception of district wide implementation of Hearth as part of Nutrition. The project implemented Hearth in two villages quite successfully but was not able to scale up these activities throughout the District.

Intervention Specific Objectives

1. Malaria Prevention and Case Management

50% of children with fever (suspected malaria) receive treatment by trained provider within 24h of onset of symptoms
60% of children sleep under ITN

2. Nutrition

60% of children exclusively breastfeed for 0-5 months
70% of children 6-9 months will receive complementary feeding
60% of children 6-23 months receive appropriate number of dose(s) of Vitamin A per year
70% of children who complete Hearth achieve and sustain adequate (200g) or catch-up (400g) growth per month for at least 2 months after Hearth (**can not be measured with the KPC Survey tool*)

3. Control of Diarrheal Disease

80% of caretakers know at least 2 danger signs for seeking care immediately
60% of sick children offered increased fluids and food during illness
60% of caregivers wash hands before food preparation, before child feeding, after defecation and after cleaning child’s feces
60% of children with diarrhea receive oral rehydration therapy

4. Immunization

80% of children 12-23m fully immunized by their first birthday (*originally, fully immunized at the time of the survey*)

5. Pneumonia Case Management

50% of children with rapid, difficult breathing (suspected pneumonia) treated at health facilities within 24 hours of the onset of symptoms

6. HIV/AIDS Prevention

70% of mothers will deliver by a trained health provider

80% of caretakers will know at least two known ways to reduce the risk of HIV/AIDS infection

III. PROCESS AND PARTNERSHIP BUILDING

The MOH is the project's main partner as it provides all health services in the District. The project also partners with UNICEF to supplement C-IMCI activities, PSI to promote and distribute Thanzi ORS and Waterguard, and has collaborated with the District Social Welfare Office. Additionally, the project collaborations with PSI/Malawi on integrated diarrhea prevention through a marketing strategy for Oral Rehydration Solution (ORS) and pot chlorination products.

The Midterm and Final KPC surveys provided an additional opportunity for partnership building with the District MOH and the Department of Social Welfare. Representatives participated in the survey training, data collection and debriefing discussions. This process provided the opportunity for project staff to better understand the activities and challenges of our partners in the communities. It also provided the opportunity for the project staff and partners to collaboratively develop potential solutions to issues identified in the communities through the survey process.

IV. METHODS

The purpose of the KPC survey is to establish estimates for the level of achievement of the end of project (EOP) targets and key preventive behaviors including, but not limited to increased utilization of preventive services, appropriate home care behaviors for sick children, and prompt care seeking. The survey has allowed program staff to assess progress on key indicators at Baseline, Midterm and Final.

The Final Evaluation KPC questionnaire is designed for mothers/caretakers of children 0-23 months and was based on the questionnaire used for the Baseline KPC survey in April 2005 and Midterm KPC in January 2007. The original questionnaire drew from the Rapid CATCH indicators and the KPC 2000+ modules with adaptations to fit the local context. The questionnaire was pre-tested before it was used for data collection and contains 49 questions that cover the topics below. Please see Annex A for the full questionnaire.

- 1-4 Identification and ages
- 5-8 Breastfeeding and complementary feeding
- 9-12 Illness recognition and care seeking
- 13 Diarrhea

- 14-16 Pneumonia
- 17-24 Malaria Control and Prevention
- 25-28 Growth Monitoring
- 29-32 Immunizations
- 33-37 Water and Sanitation
- 38-46 Maternal and Neonatal Health
- 47-48 HIV/AIDS
- 49 Sustainability

Table 9 Program and KPC Indicator Definitions

Intervention Area	Indicator Definitions	
	Numerator	Denominator
Care Seeking	Caretakers of children 0-23 months who know at least 2 childhood illness danger signs for seeking care immediately [RC 12]	All caregivers of children age 0-23 months
Home Management	Number of children 0-23 months who were offered increased fluids and continued or increased feeding during illness [RC 13]	Number of children 0-23 months who were sick in the past two weeks
Immunization	Percentage of children 12-23 months fully immunized (BCG, Polio3, DPT3, and Measles) before 24 months as verified by card	All children age 12-23 months
	Number of children age 12-23 months who are fully vaccinated before the first birthday (requires Polio 3, DPT 3 and Measles) [RC 7]	Number of children age 12-23 months with vaccination cards
	Number of caretakers with children age 12-23 months who recalled that the child received a measles vaccine [RC 8]	All caretakers of children age 12-23 months
	Number of mothers with children 0-23 months who receiving at least two tetanus toxoid injections verified by card before the birth of their youngest child [RC 4*]	All mothers with children 0-23 months
Control of Malaria	Number of children 0-23 months who received treatment for suspected malaria from a trained health provider within 24 hours	Number of children age 0-23 months with suspected malaria (fever, convulsions or malaria) in the past two weeks
	Number of children 0-23 months who slept under an ITN (ever treated or long-lasting net) the previous night [RC 9]	All children 0-23 months
Pneumonia Control Management	Number of children 0-23 who received treatment for suspected pneumonia from a trained provider within 24 hours	Number of children age 0-23 months with suspected pneumonia (rapid/difficult breathing) in the past two weeks
Control of Diarrheal Disease	Number of children 0-23 months who received ORT/ORS/home available fluids/breastfeeding for diarrhea	Number of children age 0-23 months with diarrhea in the past two weeks
	Number of caregivers of children 0-23 months who report washing their hands with soap/ash before food preparation, before child feeding, after defecation, and after attending to a child who has defecated [RC 11]	All caregivers of children age 0-23 months
Nutrition	Number of children 0-5 months who were exclusively breastfed during the past 24 hours, based on dietary recall [RC 5]	Number of children age 0-5 months

	Number of children 6-9 months who received breast milk and complementary foods during the last 24 hours, based on dietary recall [RC 6]	Number of children age 6-9 months
	Number of children 6-11 months who received at least 1 dose of Vitamin A verified by card plus the number of children 12-23 months who received at least 2 doses of Vitamin A verified by card in the previous 12 months	Number of children 6-23 months
	Number of children age 0-23m who are underweight (-2SD from the median weight-for-age, according to the 1978 WHO/NCHS reference population) [RC 1]	Number of children 0-23 months
HIV/AIDS Prevention	Number of caretakers with children 0-23 months who cite at least two known ways of reducing the risk of HIV infection [RC 10]	All caretakers with children 0-23 months
	Number of children age 0-23 months whose births were attended by skilled health personnel (Doctor, Nurse or Midwife) [RC 3]	All children age 0-23 months
Other	Number of children age 0-23 months who were born at least 24 months after the previous surviving child [RC 2]	Number of mothers with more than one biological child 0-59 months

* RC 4 is intended to measure maternal recall, however the program measured verification by card

Sampling Design

The sample size was determined using a 2 stage 30x10 clusters sampling method for surveys as outlined by the CSTS+ KPC Guidance. This model uses the following formula to calculate the sample size:

$$N = \frac{Z^2(1-P)P}{E^2}$$

N= Sample size; Z=1.96 (for a confidence interval of 95%); P= Known prevalence; E=% within=±0.05.

Thirty clusters were randomly selected from a list of all the villages in Chitipa, taking into account the differences in population size of the villages (Proportional Population Cluster Sampling method). See Annex B for the sampling framework. For each cluster, interviews were conducted with 10 households having children under the age of two years. Upon arriving in a village, the village headman was asked to identify a place considered close to the central point of the village. At the central site, a member of the survey team spun a pen. The survey team started in the direction of the pen (pointed end) to the first house. If the object pointed in the direction where there were no houses, the procedure would be repeated until there were houses in that direction.

The interview started at the nearest household and continued to the next one in the same direction until the required number of households per cluster was met. In cases where the chosen direction had less than the required sample the object would be re-spun to change direction at the farthest household and the team proceeded in that direction until the total required sample in that cluster was met.

Interviewer Recruitment

Interviewers for the Final KPC survey were recruited from among the project leadership and staff and local partner agencies. Interviewers consisted of the Child Survival Deputy Project

Manager, Project Supervisors and Health Promoters along with representatives from the District Ministry of Health and the Department of Social Welfare. All interviewers were familiar with the local cultural context, proficient in the necessary languages spoken in the communities and had experience with conducting interviews. Additionally, several members of the project staff had also participated in the project's Baseline and Midterm KPC surveys.

Interviewer Training

The interviewers completed three days of training to review the survey sampling methodology as well as how to read the survey questionnaire fluently and code responses accurately. This training was conducted by the Child Survival (CS) Project Manager and Deputy Manager. Interviewer training covered the objectives of the KPC survey, the process and rationale of 30 cluster methodology, basic survey interview techniques and an in-depth review of the survey content. The training sessions were interactive and built on the survey team members' previous experience with conducting surveys. In pairs, surveyors practiced reading the questionnaire and coding responses accurately. In addition, interviewers received training on how to check for accurate coding on survey questionnaires.

Pre-testing of the questionnaire took place in neighboring villages and provided interviewers with an additional opportunity to practice conducting the survey and coding responses on the survey form. It also allowed the survey team to take note of potential problems that may be encountered in the field and to strategize ways to overcome the identified challenges. An additional half day of training was conducted after pre-testing to review the revised questionnaire form and to discuss problems that were observed in the field or in the coding of the questionnaires. As a result of pretesting, additional possible responses were added to the sustainability question. See Annex C for a complete listing of person/roles involved with the surveying process.

Data collection

The survey staff were divided into three teams and were each assigned to ten villages that had been randomly selected proportional to size for inclusion in the survey. The fourth team was responsible for data entry and cleaning. The interviews were conducted over a period of ten days. The most significant constraint involved long distances to the villages furthest from the project office, which at times could not be covered by vehicle, because of lack of sufficient roads. The survey questionnaires were checked for accuracy in the field, so that any missing information could be gathered before the team left the village. The completed survey questionnaires were reviewed by the Project Manager, as they were received at the project office.

Data Entry and Analysis

Data entry began as the questionnaires were returned to the project office and was finished within ten days of field work. The data was entered by the Project Office Secretary, the Project Office Assistant, the Project Accountant and the Project Manager. Preliminary data analysis was conducted in EpiInfo by the Project Manager so that results could be immediately discussed with the survey team. Final data analysis and quality control checks were conducted by the WR HQ Maternal and Child Health Specialist. Frequencies, means, and cross tabulations of key variables were performed as appropriate.

V. RESULTS

The survey interviewed 300 mothers/caretakers, 44.3% (133/300) were 25 years of age or younger, while 55.7% (167/300) were 25 years old or older with an average age of 26. The children covered in the survey were 47.7% (143/300) female and 52.3% male. There were 69 children ages 0-5 months (23.0%), 77 children 6-11 months (25.7%) and 154 children 12-23 months (51.3%). The average child age was between 11 and 12 months of age. Of the mothers surveyed, 44.7% had one biological child less than 60 months old, 52.7% had two children and 2.7% had three with a mean of 1.6 children 0-59 months of age per respondent.

Table 10 Project Indicator Results

Indicator	Baseline Percentage	Midterm Percentage	Final			EOP Target
			Numerator Denominator	Percent	Confidence Interval	
CARE SEEKING						
Percentage of caretakers of children 0-23m who know at least 2 childhood illness danger signs for seeking care immediately (RC)	71.1%	88.7%	287/300	95.7%	93.3%-98.0%	80% ▲
HOME MANAGEMENT						
Percentage of sick children age 0-23m who received increased fluids and continued feeding during an illness in the past two weeks (RC)	3.9%	17.8%	51/226	22.6%	16.7%-28.4%	50% ▼
IMMUNIZATION						
Percentage of all children 12-23m fully immunized (BCG, Polio3, DPT3, and Measles) before 24 months as verified by card. <i>*BL includes children 12-23 months who had a BCG scar and children 9-11 months who had a DPT3, Polio3 and measles vaccine</i>	68.8%	63.7%	113/154	73.4%	65.5%-81.3%	80% ▼
Percentage of children age 12-23m who are fully vaccinated (against the five vaccine-preventable diseases) before the first birthday (RC) <i>*BL includes children 12-23 months who had a BCG scar and children 9-11 months who had a DPT3, Polio3 and measles vaccine</i>	68.8%	75.2%	99/138	71.7%	64.1%-79.4%	RC
Percentage of children age 12-23m who received a measles vaccine <i>**Includes only measles verified by card</i>	55.2%	64.1%	133/179	74.3%	66.3%-82.3%	RC
MALARIA						
Percentage of children age 0-23m who slept under an insecticide-treated net the previous night (RC) <i>*BL includes all nets regardless of insecticide treatment</i>	41.0%	39.7%	131/300	43.7%	36.9%-50.4%	60% ▼
Percentage of children 0-23m with suspected malaria in the previous 2 weeks who sought treatment from a trained provider within 24 hours of illness onset	18%	41.4%	40/96	41.7%	29.6%-53.7%	50% ▼
PNEUMONIA CASE MANAGEMENT						

Percentage of children 0-23m with rapid/difficult breathing (suspected pneumonia) in the previous 2 weeks who sought treatment from a trained provider within 24 hours	20.9%	31.0%	11/25	44.0%	24.9%-63.1%	50% ▼
CONTROL OF DIARRHEAL DISEASE						
Percentage of children 0-23m with diarrhea in the previous 2 weeks who received ORT (home available fluids or ORS)	8%	58.3%	58/90	64.4%	52.8%-76.1%	60% ▲
Percentage of mothers with children age 0-23m who report that they wash their hands with soap/ash before food preparation, before feeding children, after defecation, and after attending to a child who has defecated (RC) <i>*BL from LRA1</i>	3.9%	12.3%	58/300	19.3%	15.0%-23.7%	60% ▼
NUTRITION						
Percentage of children 0-5m who were exclusively breastfed during the last 24 hours (RC)	40.0%	84.2%	55/69	79.7%	69.8%-89.6%	60% ▲
Percentage of children 6-9m who received breastmilk and complementary foods during the last 24 hours (RC)	39.8%	80.5%	52/61	85.2%	76.0%-94.5%	70% ▲
Percentage of children 6-11 months who received at least 1 dose of Vitamin A and children 12-23 months who received at least 2 doses of Vitamin A in the previous 12 months, as evidenced by card	--	11.1%	15/231	6.5%	2.0%-11.0%	60% ▼
HIV/AIDS PREVENTION						
Percentage of mothers with children age 0-23m who cite at least two known ways of reducing the risk of HIV infection (RC)	67.5%	76.5%	257/300	85.7%	81.7%-89.7%	80% ▲
Percentage of children age 0-23m whose births were attended by skilled health personnel (RC)	55.2%	61.0%	218/300	72.7%	64.9%-80.4%	70% ▲
RAPID CATCH (NOT INCLUDED AS PROGRAM GOALS)						
Percentage of children age 0-23m who are underweight (-2SD from the median weight-for-age, according to the 1978 WHO/NCHS reference population)	29.9%	10.4%	45/297	15.2%	11.2%-19.1%	RC
Percentage of children age 0-23m who were born at least 24 months after the previous surviving child	39.5%	83.5%	145/166	87.3%	81.3%-93.4%	RC
Percentage of mothers with children 0-23m who received at least two tetanus toxoid injections before the birth of their youngest child <i>**Includes 2TT verified by card</i> Of mothers with cards	64.0%	53.0% 82.4%	178/300	59.3% 92.5%	51.7%-66.9%	RC

See Annex D for a detailed description of Baseline, Midterm and Final KPC results.

VI. DISCUSSION

Discussion of Program Indicators

Community Integrated Management of Childhood Illness

The number of caretakers who were able to cite two or more danger signs increased steadily from the Baseline of 77.1% to 88.7% at Midterm and 95.7% at Final, surpassing the EOP target of 80%. Moreover, the increases at both Midterm and Final are statistically significant based on a 95% confidence interval. Results were cross tabulated against maternal age (< 25 years and ≥ 25 years) and no significant difference was seen. When asked what contributed to the success of this indicator staff cited the strong relationships and consistent messaging at the health centers.

A statistically significant increase was also seen in the percentage of children who were offered increased fluids and continued feeding during illness from the Baseline of 3.9% to the Final of 22.6%. This however, fell below the project target of 60%. Run independently, the final percentage of children offered increased fluids was 29.2% while those children receiving increased or continued foods was 49.6%. Cross tabulations of maternal age, child age of less than six months and incidence of diarrhea in the last two weeks showed no significant difference.

Immunization

The Baseline immunization rate included children 12 months and older who had a BCG scar and those children 9-11 months who had been vaccinated with DPT3, Polio3 and measles verified by card. The survey questionnaire was changed at the Midterm KPC to bring the project in line with current international standards thus making comparisons to the Baseline difficult. According to the Rapid Catch definition, the percentage of children with cards who were completely immunized (DPT3, Polio3 and measles) by the first birthday fell from 75.2% to 71.7% from Midterm to Final.

This downward trend was identified following the March monitoring survey and the results were shared with the District Health Management Team. At that time, the District MOH was reporting a fully immunized rate of around 77%. The MOH and project staff related the dip in immunization levels to the lack of immunization cards due to printing contract issues. However, the percentage child vaccination cards seen by survey interviewers increased from 76.3% at Midterm to 88.3% at Final. The DHMT also stated that they have had some recent issues of stock outs with vaccinations that could have contributed to the drop in immunization rates.

Keeping with the intent of the original indicator, Midterm and Final immunization rates were also calculated to include children, 12-23 months, fully immunized (BCG, DPT3, Polio3 and measles) at the time of the survey. At Midterm 63.7% of children less than 24 months were fully vaccinated with 73.4% at Final, below the EOP target of 80%. The Rapid CATCH indicators include the number of children who received a measles vaccine based upon maternal recall as an estimate of overall immunization rate regardless of card status. Using this definition, 94.8% children received a measles vaccine at Midterm and 91.6% at Final. Based on a 95% confidence interval, the differences seen in immunization rates from Midterm to Final are not statistically significant. Cross tabulations by maternal age and child gender were run for both immunization by 12 and 24 months and no difference in immunization coverage was observed.

Malaria

The number of children who slept under an insecticide treated net the night before was 43.7% at Final. This represents only a slight, and statistically insignificant, change from the 39.7% at Midterm or the 41% at Baseline, although the Baseline included all nets regardless of treatment.

However, overall net ownership has increased dramatically from 44.2% in 2005, to 55.1% in 2007 to 88.0% in 2009. The percentage of those with nets that have been treated in the last six months or were long-lasting nets was 65.5% (173/264), up from 45% at Midterm. Of those who responded that they had nets, 59.6% (173/264) had the net hanging while 45.8% (121/264) of the households were able to produce the net, but it was not hanging and 4.5% (12/264) were not able to locate the net.

There was a net dipping campaign conducted by the MOH about a week before the survey and staff reported that people fear hanging the nets the same day after dipping as it is believed the chemicals will cause skin irritation. Seasonality changes may have played a role in ITN usage as the Baseline was conducted in May, the Midterm was in January at the height of the hot season and the Final was conducted in July, the coldest part of the year when mosquitoes are less bothersome. The project does have some monitoring information that indicated increased usage during March of 2009. Cross tabulations showed insignificant differences when comparing maternal age (<25/≥25), child age (0-5 months, 6-11 months and 12-24 months) and child gender.

The percentage of children with suspected malaria taken to the health center within 24 hours improved from Baseline (15.5%) to Midterm (41.4%). However, no additional improvement was achieved from Midterm to Final (41.7%) missing the project's target of 50%. Despite 93.3% (290/300) of the caretakers listing fever as a danger sign requiring treatment at the health facility, the accompanying behavior was lagging, perhaps related to decreases in access to malaria treatment at community level. In October 2008 the Malawi MOH changed the first line treatment for malaria from Fansidar to Artemisinin Combination Therapy (ACT, commonly referred to as LA). The MOH has yet to train the HSAs how to prescribe the new drug; therefore, there is no available treatment for malaria at the community/health post level. The MOH has plans to train and stock the HSAs in the new drug, but the timing is yet unknown. In addition, the Promoter staff reported issues with the quality of services provided at specific health centers including lack of time spent examining the child, lack of explanation or instructions when drugs were prescribed or even a lack of weekend hours. These issues were raised with the DHMT in May 2009 and ongoing dialog between the program and MOH staff has continued to identify problematic health centers. However, this is inconsistent with the staff's earlier support of the health centers and Final Evaluation interviews where all mothers stated that the last time they went to the health center they were assisted.

Nevertheless, the lack of improvement in this indicator is especially concerning when compared to prevalence and severity of malaria in children under five. Based on the program's Health Information System, malaria represented 38% of all deaths for children less than five years of age in the project area from August 2007 to July 2009. Malaria prevention and immediate care seeking remains a critical need for the children of Chitipa.

Pneumonia Case Management

The percentage of children with rapid or difficult breathing (suspected pneumonia) that were treated at the health facility had risen from the Baseline of 20.9% to 31.0% at Midterm to 44.0% at Final. The small number of cases (25) resulting in a wide confidence interval (24.9%-63.1% at Final) makes it difficult to determine if this increase is statistically significant. Nonetheless, this

indicator fell below the project's target of 50%. The staff cited difficulties with the quality of health services and unpredictable hours at the health center to be a contributing factor, as discussed with malaria.

Control of Diarrheal Diseases

Large improvements can be seen in the percentage of children with diarrhea in the past two weeks who were offered ORT (ORS, home available fluids or breastfeeding). At Baseline, only 8% of children were given ORT which increased at Midterm to 58.3% and 64.4% at the Final, surpassing the end of project target of 60%. If "tak(ing) the child to the health center" was included as a positive response, assuming that the child will receive ORS, the percentage rose to 64.6% at Midterm 82.2% at Final. These improvements can be seen without differentiation between maternal age (<25/ ≥25), child age (0-5 months, 6-11 months or 12-23 months) or gender of the child.

Hand washing at all four critical times remained a challenge throughout the project. At Baseline 3.9% of caretakers reported washing hands with soap or ash after defecation, after helping a child who has defecated, before food preparation and before feeding a child. This improved to 12.3% in 2007 and to 19.3% in July of 2009; yet fell far below the target of 60%. Examining the four times individually: 85.7% of caretakers listed after defecation, 68.3% listed after helping a child who has defecated, 55.7% cited before food preparation and 38.0% listed before feeding a child. The Malawi MOH policy is that hand washing should occur at five times; after using the toilet, after changing a child's nappy, before feeding a child or breastfeeding, before preparing food, and before eating. Only 15.0% of caretakers reported washing at all five of these times. As water availability is a concern in Chitipa the possibility of this hindering hand washing was investigated. However, staff felt that water scarcity had little impact on the caretaker's behavior of hand washing and while not statistically valid, this was supported by a sub-analysis of the Final KPC results by supervision area.

Nutrition

The large improvements seen in exclusive breastfeeding and complementary feeding rates from the Baseline to Midterm were maintained through to the Final representing almost a two fold increase in both indicators. Exclusive breastfeeding in children 0-5 months increased from 40.0% at Baseline to 84.2% at Midterm and was maintained at 79.7% in the Final survey, easily surpassing the project target of 60%. These gains were seen uniformly regardless of maternal age or the number of children living in the household (biological or otherwise). Continued breastfeeding and complementary feeding in children 6-9 months rose from 39.8% to 80.5% to 82.5%, again well surpassing the target of 70%. Breastfeeding through two years of age is also strongly supported by the District MOH. The District Hospital has multiple signs reading "Chitipa District Hospital is a Baby Friendly Hospital. We support, promote and protect breastfeeding" thus providing a consistent message from the village to the District level.

Written verification of Vitamin A has been an ongoing concern of the project. The project's target was that 60% of children 6-11 months were to receive one dose of Vitamin A and children 12-23 months were to receive two doses of Vitamin A within the past twelve months as evidenced in their health card. This indicator was not measured at the Baseline survey, but had a statistically insignificant drop from 11.1% at Midterm to 6.0% at Final. The District MOH is

committed to providing Vitamin A supplementation and does so through outreach campaigns held throughout the district every six months. However, the DHMT specifically avoids asking caretakers to bring their health cards in fear that those who do not have cards will not attend. When examining Vitamin A coverage by maternal recall rates from Midterm to Final, a similar statistically insignificant dip was seen from 95.0% to 89.2%.

HIV Prevention

There has been a steady increase in caretakers' knowledge of methods to help prevent the spread of HIV. The percentage of mothers able to list two known methods of preventing HIV increased from 67.5% at Baseline to 76.5% at Midterm to 85.7% at Final, exceeding the program target of 80%. Numerator and denominator values are no longer available for the baseline data so we are unable to determine if this change is statistically significant. However, as the project implemented the HIV lessons in FY09 it is difficult to link this increase in knowledge to programmatic activities.

Improvements have also been seen in the percentage of children 0-23 months whose births were attended by skilled personnel (a doctor or nurse) from 55.2% at Baseline to 61.0% at Midterm to 72.7% at the Final exceeding the target of 70%. Unfortunately, PMTCT services are only available at the District Hospital. However, it is hoped that increased health center births will facilitate this treatment as it becomes available at the health center level. Little difference was observed in skilled delivery based on maternal age.

Discussion of Other Results

The percentage of children age 0-23 months who were underweight as defined by the Rapid CATCH indicator (-2SD from the median weight for age, according to the 1978 WHO reference population) decreased from 29.9% at Baseline to 10.4% at Midterm to 15.2% at the time of the Final survey. Overall, this is a noteworthy change in the prevalence of underweight children from Baseline to Final, although there was a small and not statistically significant rebound from Midterm to Final. Cross tabulations revealed little difference between the percentages of male and female children who were underweight. It is encouraging to see movement on this indicator in light of the increased exclusive and continued breastfeeding practices.

Birth Spacing

In a 2006 monitoring survey, only 39.5% of children 0-23 months were born at least 24 months after a previous surviving child. At Midterm, this rose to 83.5% and at the Final 87.3% of the children surveyed had adequate birth spacing. While there are limitations in comparing results from surveys with varying sampling methodologies and rigor, the confidence intervals suggest that the change from Baseline to Final is significant. The program celebrates this positive behavior for maternal and child health, but timing significantly decreases the probability that this increase (especially between the Baseline and the Midterm) was a result of programmatic activities.

Maternal Care

According to the Final, 59.3% of mothers received two or more doses of tetanus toxoid (TT) vaccine representing an increase over the 53.0% at Midterm; though both are lower than the

Baseline indication of 64.0%. Contributing to this may be difficulties with documentation and possible stock-outs as previously mentioned. It should be noted that the Rapid CATCH definition includes maternal recall for two TT doses; however, the program measured two TT doses verified by card. If we examine the percentage of mothers with two TT doses compared to those mothers that had health cards at the time of the survey the percentages rise to 83.8% at Baseline to 82.4% at Midterm and 92.5% at Final. Cross tabulations by maternal age showed little variance. Additionally, the number of mothers who had two verified doses of preventative malaria treatment (SP) rose from 58.2% at Baseline to 69.1% at Midterm and 71.7% at Final. While the percentage of mothers reporting the use of prenatal iron held steady at 85.2% to 86.3% to 88.3%.

Sustainability

The sustainability of the Care Group model using unpaid volunteers has been proven effective and sustainable in other WR child survival programs, particularly evidenced in Mozambique where the Care Group Model was first implemented^{9,10}. In order to assess the fidelity of the World Relief *Tube Poka* Child Survival Project in Malawi, a question was added to the Midterm and Final surveys to evaluate respondents' exposure to the program two and four years after its inception. At Midterm, 46.0% of households surveyed were visited by a World Relief/ Tube Poka volunteer in the last two weeks and 32.3% reported that they had not yet been visited in their home. At Final, the percentage of visitation in the last two weeks fell to 17.3%, 42.3% responded that they had been visited in the last month, 32.0% over a month ago and 25.7% responded never. Staff stated that within the Malawi context, the term "never" is different from "never ever", but nonetheless this represents a critical area of ongoing concern. While the Final evaluation team will further explore this issue, changes to the Care Group model in supervision and volunteer selection coupled with implementation difficulties appear to be strong contributing factors.

External Comparisons

Table 11 Comparison of Indicators with National Data Sources

Indicators	DHS 2004¹¹ (U5 unless indicated)	MICS 2006¹² (U5 unless indicated)	Final KPC 2009 (U2 unless indicated)
Percent children with diarrhea treated with ORT	69.0% *	--	64.4%
Percent of mothers who offered more liquids when child was ill (DHS= ill with diarrhea)	35.9%	--	29.2%
Percent of mothers who offered more or the same food when child was ill (DHS= ill with diarrhea)	55.1%	--	49.6%
Percent mothers who sought treatment from HF for child with fast/difficult breathing	19.3% *	--	44.0%
Percent of mothers who sought treatment from HF within 48 hours for child with fever	21.0% *	--	49.0%
Percent of HH who own a bed net	39.1% *	35.4% **	88.0%
Percent children who slept under bed net last night	15.0% *	4.6% **	43.7%
Percent children underweight	22.8% *	19.5% **	15.2%
Percent of children who were breastfed within hour of birth	68.6% *	--	79.3%
Percent of children 0-5 months who are exclusively breastfed	53.3%	55.2% *	79.7%
Percent children 12-23months fully immunized at time of survey	51.1% *	62.0% *	73.4%
Percent with four or more ANC visits	55.7% *	--	46.3%

Percent who took iron tablets during pregnancy	--	31.8%**	88.3%
Percent delivery by a health professional	52.0%*	50.4%*	72.7%

* Rural Rates **Rates for Chitipa District

Information Dissemination

Data collection and entry was occurred August 6th-13th, 2009. An initial snapshot of key indicators was run and discussed with the survey team as the very first level of sharing the survey outcomes. Results of this survey together with the results of the Final Evaluation were compiled and shared by the evaluation consultant with stakeholders in Chitipa and Lilongwe as follows:

July 31 st , 2009	Tube Poka Supervisors and select Health Promoters
August 12 th , 2009	Chitipa District Executive Committee (the technical arm of the District Development Secretariat), UNICEF and PSI
August 14 th , 2009	World Relief Malawi Leadership Team
August 14 th , 2009	USAID Mission

After the departure of the evaluator and WR Headquarters staff, the project team continued to hold a series of dissemination meetings across the District with various partners at community level the week of August 17th-21st, 2009.

² Tube Poka Project Census, Chitipa, Malawi 2006

³ Chitipa Socioeconomic Profile 2002

⁴ Demographic Health Survey. (2004). Malawi Demographic Health Survey Report.

⁵ Chitipa District Socio Economic Profile. Republic of Malawi October 2002

⁶ Global Strategy on Infant and Young Child Feeding, World Health Organization (2003)

⁷ A. Edward, P. Ernst, C. Taylor, S. Becker, E. Mazive, H. Perry . Examining the evidence of under-five mortality reduction in a community-based programme in Gaza, Mozambique. *Transactions of the Royal Society of Tropical Medicine and Hygiene*, Volume 101, Issue 8, Pages 814-82

⁸ WR Mozambique Final Evaluation Findings Report, Taylor, C. 2003

⁹ WR Mozambique Final Evaluation Findings Report, Taylor, C. 2003

¹⁰ A. Edward, P. Ernst, C. Taylor, S. Becker, E. Mazive, H. Perry . Examining the evidence of under-five mortality reduction in a community-based programme in Gaza, Mozambique. *Transactions of the Royal Society of Tropical Medicine and Hygiene*, Volume 101, Issue 8, Pages 814-82

¹¹ Demographic Health Survey. (2004). Malawi Demographic Health Survey Report.

¹² Monitoring the Situation of Children and Women. Malawi Multiple Indicator Cluster Survey. (2006). MICS Preliminary Report.

ANNEX A: FINAL KPC SURVEY QUESTIONNAIRE

CHITIPA DISTRICT - TUBE POKA CHILD SURVIVAL PROGRAM

IDENTIFICATION SECTION: _____ SUPERVISION AREA: _____

Village: _____

Household No. _____

Checked by: _____ (Name of Supervisor)

INTERVIEWER:

Begin by introducing yourself, for example, "We are from the Tube Poka Child Survival Program and we would like to ask you for some information that will help us improve the health of people in this area."

*Ask the mother or caretaker of the child all the questions as clearly as possible in order to get appropriate responses. Probing may be required in certain instances to try and reach the desired response from the interviewee. **Please keep in mind that this survey targets mothers of children less than 24 months of age.***

Date of interview: Day __ __ / Month __ __ / Year __ __ __ __

Name of interviewer: _____

Name of Mother: _____

BASIC DEMOGRAPHIC INFORMATION

1. How old are you? __ __ years
2. How many children living in this household are under the age of five? __ child/children
3. How many of those children are your biological children? __ child/children
4. READ ONE OF THE FOLLOWING QUESTIONS BASED UPON MOTHER'S RESPONSE TO Q.3

ONLY 1 CHILD UNDER FIVE: "What is the name, sex, and date of birth of that child?"

MORE THAN 1 CHILD UNDER FIVE: “What are the names, sexes, and dates of birth of your two youngest biological children?”

	NAME	SEX	DATE OF BIRTH	AGE IN MONTHS
1		1. MALE 2. FEMALE	___ / ___ / ___ DD MM YY	
2		1. MALE 2. FEMALE	___ / ___ / ___ DD MM YY	

IF THE YOUNGEST CHILD IS 24 MONTHS OR OLDER, STOP AND GO TO THE NEXT HOUSE.

ALL SUBSEQUENT QUESTIONS PERTAIN TO THE **YOUNGEST** CHILD UNDER THE AGE OF **TWO** YEARS.

BREASTFEEDING & COMPLEMENTARY FEEDING

5. Are you breastfeeding (name of child) now?

- A. Yes → **Go to 7**
- B. No

6. Have you ever breastfeed (name of child)?

- A. Yes
- B. No → **Go to 8**

7. How long after birth did you first put (name of child) to the breast?

- A. Immediately/within first hour after delivery
- B. After the first hour after delivery
- C. After eight hours after delivery

D. Don't know

8. What types of liquids and foods did (name of child) consume yesterday during the day or at night?

PLACE A CHECK MARK IN THE BOX NEXT TO EACH ITEM CONSUMED.

	LIQUID/FOOD	CONSUMED IN LAST 24 HOURS?
A	Breastmilk?	
B	Plain water?	
C	Other liquids?	
D	Mashed, pureed, solid, or semi-solid foods?	
E	Anything else? SPECIFY:	_____ _____ _____ _____

Illness Recognition and Care Seeking

9. Sometimes children get sick and need to receive care or treatment for illnesses. What are the signs of illness that would indicate your child needs treatment? DO NOT PROMPT. CIRCLE ALL MENTIONED.

- A. Don't know
- B. Looks unwell or not playing normally
- C. Not eating, drinking, or breastfeeding
- D. Lethargic or difficult to wake
- E. High fever

- F. Fast or difficult breathing
- G. Vomits everything
- H. Convulsions
- I. Gets worse despite home care
- J. Looks dehydrated (dry mouth or no tears)
- K. Other _____

(SPECIFY)

10. Did (name of child) experience any of the following in the past two weeks?

READ CHOICES ALOUD AND CIRCLE ALL MENTIONED BY RESPONDENT.

A. Diarrhea

A.1 How many times did the child have a loose stool?

Less than 3 3 or more (CIRCLE ONE)

B. Blood in stool

C. Cough

D. Rapid or difficult breathing

E. Fever

F. Malaria

G. Convulsions

H. Other _____

(SPECIFY)

I. None of the above → **GO TO Q-22**

11. When (name of child) was sick, was he/she offered less than usual to drink, about the same amount, or more than usual to drink?"

A. Less than usual

B. Same amount

C. More than usual

12. When (name of child) was sick, was he/she offered less than usual to eat, about the same amount, or more than usual to eat?

A. Less than usual

B. Same amount

C. More than usual

Diarrhea

**THE FOLLOWING QUESTION PERTAINS ONLY TO THE CHILDREN WHO HAD
DIARRHEA IN Question 10-A**

13. When (name of child) had diarrhea, did you give the child anything? DO NOT PROMPT. MULTIPLE RESPONSES POSSIBLE. AFTER EACH RESPONSE, ASK: ANYTHING ELSE?

A. Nothing

B. ORS sachet

C. Sugar-salt solution

D. Cereal based ORT (rice water, maize water)

E. Breastmilk

F. Water

G. Other available drinks

H. Medication for diarrhea

I. Take child to the hospital/clinic

J. Other _____

SPECIFY

PNEUMONIA

**THE FOLLOWING QUESTIONS PERTAIN ONLY TO THE CHILDREN WHO HAD
RAPID OR DIFFICULT BREATHING Question 10-D.**

14. Did you seek treatment for your child?

- A. Yes
- B. No → **GO TO Q-22**

15. From whom did you seek treatment when (name of child) had difficulty in breathing? DO NOT PROMPT. MULTIPLE RESPONSES POSSIBLE.

- A. Hospital*
- B. Health Center/Health Post*
- C. Injectionist → **GO TO Q-22**
- D. Traditional birth attendant → **GO TO Q-22**
- E. Traditional healer → **GO TO Q-22**
- F. Pharmacy/shop → **GO TO Q-22**
- G. Relatives and friends → **GO TO Q-22**
- H. Others (specify) _____ → **GO TO Q-22**

16. *IF THE MOTHER ANSWERED A or B ABOVE, ASK: How soon after the difficulty in breathing began did (name of child) receive treatment? DO NOT PROMPT, JUST ASK HOW LONG IT WAS UNTIL THE CHILD RECEIVED TREATMENT.

- A. Less than one day (within 24h)
- B. After one day (24h - 48h)
- C. Two days or more
- D. Don't know

THE FOLLOWING QUESTIONS PERTAIN ONLY TO THE CHILDREN WHO HAD FEVER, MALARIA OR CONVULSIONS IN Question 10-E,F,G.

17. When (name of child) had fever, what treatment did you give? DO NOT PROMPT. MULTIPLE RESPONSES POSSIBLE.

- A. Take the child to the hospital or health center*
- B. Home treatment → GO TO Q-19
- C. Wet the child to decrease fever → GO TO Q-19
- D. Other (specify) _____ → GO TO Q-19

18. *IF THE MOTHER ANSWERED A ABOVE, ASK: How soon after the fever started was (name of child) treated at the hospital or health center? DO NOT PROMPT, JUST ASK HOW LONG IT WAS UNTIL THE CHILD RECEIVED TREATMENT.

- A. Less than one day (within 24h)
- B. After one day (24h - 48h)
- C. Two days or more
- D. Did not receive treatment
- E. Don't know

19. Did (name of child) take any drugs for the fever?

- A. Yes
- B. No → GO TO Q-22
- C. Don't know → GO TO Q-22

20. What drugs did (name of child) take? DO NOT PROMPT.

- A. SP/Fansidar

- B. La
- C. Chloroquine
- D. Amodiaquine
- E. Quinine
- F. ACT
- G. Other _____

SPECIFY

- H. Don't know

21. When did (name of child) take the drugs for the fever? DO NOT PROMPT, JUST ASK HOW LONG IT WAS UNTIL THE CHILD RECEIVED THE DRUGS.

- A. Less than one day (within 24h)
- B. After one day (24h – 48h)
- C. Two days or more
- D. Don't know

Malaria Prevention

22. Do you have any mosquito nets in your house? IF YES, ASK: Can I see it?

- A. Yes (Net seen hanging)
- B. Yes (Net seen, but not hanging)
- C. Yes (Net NOT seen)
- D. No → GO TO Q-25
- E. Doesn't know → GO TO Q-25

23. Who slept under a mosquito net last night? DO NOT PROMPT. CIRCLE ALL THAT APPLY.

- A. Child (name of child)
- B. Respondent (mother)
- C. Other individual(s) _____
(SPECIFY)
- D. Did not use a net

24. Was the mosquito net ever soaked or dipped in a liquid to repel mosquitoes or bugs?

- A. Yes, within the past 6 months.
- B. Yes, within the past 1 year.
- C. No
- D. Long-lasting net; does not need to be retreated
- E. Doesn't know

Growth Monitoring

25. Does (name of child) have a growth monitoring card? ASK THE MOTHER TO SEE THE CARD.

- a. Yes (Card is seen by interviewer)
- b. Yes, but card is missing or lost (Card is NOT seen by interviewer) → GO TO Q-27
- c. No → GO TO Q-27

26. LOOK AT THE GROWTH MONITORING CARD OF THE CHILD AND RECORD THE FOLLOWING INFORMATION: Has the child been weighed in the last 4 months?

- A. Yes
- B. No

27. May I weigh (name of child)?

A. Yes

B. No → **Go to Q-29**

28. IF MOTHER AGREES, WEIGH THE CHILD AND RECORD WEIGHT BELOW.
RECORD TO THE NEAREST TENTH.

___ ___ . ___ KILOGRAMS

Immunizations

29. Did (name of child) ever receive an injection in the leg to prevent measles?

A. Yes

B. No

C. Don't know

30. Did (name of child) receive a Vitamin A dose in the last 6 months?

A. Yes

B. No

C. Don't know

31. Do you have a card or health passbook where (name of child)'s vaccinations are written down? ASK TO SEE THE CARD/HEALTH PASSBOOK.

A. Yes (Card is seen by interviewer)

B. Yes, but card is missing or lost (Card is NOT seen by interviewer) → **GO TO Q-33**

C. No (Never had a card) → **GO TO Q-33**

D. Doesn't know → **GO TO Q-33**

32. RECORD INFORMATION EXACTLY AS IT APPEARS ON (NAME OF CHILD'S)
VACCINATION CARD.

	DAY		MONTH		YEAR	
BCG						
Polio 0						
Polio 1						
Polio 2						
Polio 3						
DPT 1+HepB+Hib						
DPT 2+ HepB+Hib						
DPT 3+ HepB+Hib						
Measles						
Vitamin A						

Water and Sanitation

THE FOLLOWING QUESTIONS APPLY TO THE MOTHER

33. Do you treat your water in any way to make it safer for drinking?

- A. Yes
- B. No →GO TO Q-35
- C. Don't know →GO TO Q-35

34. If yes, what do you usually do to the water to make it safer to drink? DO NOT PROMPT. CIRCLE ALL MENTIONED.

- A. Let it stand and settle/sedimentation
- B. Strain it through cloth
- C. Boil
- D. Add bleach/chlorine/Waterguard
- E. Water filter (ceramic, sand, composite)
- F. Solar disinfection
- G. Other

H. Don't know

35. When do you wash your hands? DO NOT PROMPT. CIRCLE ALL MENTIONED.

A. Never

B. Before food preparation

C. Before feeding child

D. After defecation/visiting toilet

E. After attending to a child who has defecated/soiled

F. Before eating

G. Other _____

(SPECIFY)

36. Do you use soap or ash when washing your hands?

A. Yes

B. No → GO TO Q-38

37. ASK TO SEE SOAP OR OTHER SUBSTANCE USED FOR HANDWASHING.

A. Soap observed

B. Soap substitute (e.g. ash) observed

C. Soap NOT observed

Maternal and Neonatal Health

38. When you were pregnant with (name of child) did you go to the health center for antenatal checkups? If yes, how many times?

A. Yes, once

B. Yes, twice

C. Yes, three times

- D. Yes, four or more times
- E. No
- F. Don't know

39. While you were pregnant with (name of child) did you receive an antenatal health card? ASK TO SEE THE CARD.

- A. Yes (Card is seen by interviewer)
- B. Yes (Card is NOT seen by interviewer) →GO TO Q-42
- C. No →GO TO Q-42
- D. Doesn't know →GO TO Q-42

40. CHECK CARD TO SEE HOW MANY TETANUS INJECTIONS THE MOTHER RECEIVED:

- A. None
- B. One
- C. Two
- D. More than two

41. CHECK CARD TO SEE HOW MANY DOSES OF SP THE MOTHER RECEIVED:

- A. None
- B. One
- C. Two
- D. More than two

42. Did you take iron tablets daily during your last pregnancy?

- A. Yes

B. No

43. Now I would like to ask you about the time when you gave birth to (Name of child).
Who assisted you with (name of child) delivery? (DO NOT PROMPT.)

A. Doctor

B. Nurse/midwife

C. Traditional birth attendant _____

(NAME)

D. Family member or friend _____

(SPECIFY RELATIONSHIP TO RESPONDENT)

E. Other _____

(SPECIFY)

F. No one

44. After (name of child) was born, did any health care provider or traditional birth attendant check on (name of child's) health?

A. Yes

B. No →GO TO Q-47

C. Don't know →GO TO Q-47

45. Who checked on (name of child's) health at that time? (DO NOT PROMT. CIRCLE ALL MENTIONED.)

A. Doctor

B. Nurse/midwife

C. Traditional birth attendant

D. Family member or friend _____

(SPECIFY RELATIONSHIP TO RESPONDENT)

E. Other _____

(SPECIFY)

F. No one

46. How long after the birth of (name of child) did the first check take place?

A. Less than one day (within 24h)

B. After one day (24h - 48h))

C. Two days or more

D. Don't know

HIV/AIDS

47. Have you ever heard of HIV/AIDS?

A. Yes

B. No → **Go to Q-49**

48. What can a person do to avoid getting AIDS or the virus that causes AIDS? (DO NOT PROMPT. CIRCLE ALL MENTIONED.)

A. Abstain from sex

B. Use condoms

C. Limit sex to one partner/Stay faithful to one partner

D. HIV Testing and Counseling/VCT

E. Limit number of sexual partners

F. Avoid sex with prostitutes

G. Avoid sex with persons who have many partners

H. Avoid intercourse with persons of the same sex

- I. Avoid sex with persons who inject drugs intravenously
 - J. Avoid blood transfusions
 - K. Avoid injections
 - L. Avoid sharing razors, blades
 - M. Avoid kissing
 - N. Avoid mosquito bites
 - O. Seek protection from traditional healer
 - P. Nothing
 - Q. Other _____
- (SPECIFY)
- R. Doesn't know

Sustainability

49. When did World Relief/Tube Poke volunteer visit you?

- A. Last week
- B. Past two weeks
- C. Past three weeks
- D. Past four weeks
- E. Never
- F. Other (Added after pre-testing)

THE END

Thank you for responding to all these questions.

ANNEX B: SAMPLING FRAMEWORK

Cluster	District	Code	SS	RS	RS
1		361	56	55	107
2		1165	57	35	781
3	1884*	Friedrick Nyando	58	36	060
4		2655	59	36	190
5		2860	60	36	584
6		3081	61	36	900
7		3872	62	37	088
8		4347	63	37	482
9		4557	64	37	938
10		5056	65	38	206
11		7067	66	38	668
12	7753*	Chuba	67	41	359*
13		9202	68	41	831
14		9817	69	42	024
15		0000	70	42	282
16		10281	71	42	447
17		10510	72	42	590
18		11049	73	42	963
19		11609	74	43	057
20		12349	75	43	325
21		12593	76	45	072
22		13041	77	45	299
23	13813*	Akim Tondok Nyumbi	78	45	585
24		13909	79	45	949
25		14190	80	46	254
26		15899	81	46	909
27		16459	82	47	468*
28		16652	83	48	550
29		16850	84	48	683
30		17140	85	49	079
31		17653	86	49	180
32		17856	87	49	779
33		18054	88	50	676
34	20246*	Iyera	89	51	271
35		20639	90	51	542
36		20878	91	52	344
37		21139	92	52	781
38		21328	93	53	691*
39		21648	94	54	017
40		21886	95	54	363
41		22041	96	54	803
42		22305	97	56	645
43		22448	98	56	788
44		22721	99	57	079
45		23128	100	57	168
46		23401	101	57	473
47		23869	102	57	619
48		24169	103	57	661
49		24442	104	58	094
50		24810	105	58	239
51		25072	106	58	482
52	33709*	Mukumbungu	107	58	510
53	24128		108	58	610
			109	58	755
			110	58	828
			111	59	055
			112	59	264
116		60271			
117		60655			
118		60883			
119		61348			
120		61720			
121		61934			
122		62109			
123		62229			
124		62589			
125		62743			
126		62855			
127		62912			
128		62950			
129		63064			
130		63739			
131		64089			
132		64614			
133		64958			
134		65580			
135		66118*	Chirak 1		
136		66575			
137		66851			
138		67221			
139		67569			
140		68040			
141		68779			
142		69284			
143		69879			
144		70804			
145		71345			
146		71564			
147		72102*	Kenema District		
148		73318			
149		74369			
150		74987			
151		75645			
152		76827			
153		77133			
154		77418			
155		77678			
156		78371*	Mkoma 1		
157		78467			
158		79348			
159		79698			
160		80122			
161		80329			
162		80931			
163		81213			
164		81796			
165		82427			
166		82633			

170 83 442
 171 84 116
 172 84 246x Jumbo
 173 84 823
 174 84 924
 175 85 468
 176 85 770
 177 86 333
 178 86 815
 179 87 264
 180 87 688
 181 87 828
 182 87 992
 183 88 217
 184 0000
 185 88 575
 186 88 773
 187 88 936
 188 89 140
 189 90 349x Moses Mkisi
 190 90 570
 191 91 268
 192 91 528
 192 92 047
 194 92 662
 195 92 887
 196 93 391
 197 94 046
 198 94 421
 199 94 658
 200 95 026
 201 95 414
 202 0000
 203 96 144
 204 96 481x Robert Chagho
 205 96 633
 206 96 967
 207 97 173
 208 97 547
 209 98 546
 210 99 041
 211 99 261
 212 99 586
 213 99 800
 214 100 398
 215 100 631
 216 101 179
 217 101 575
 218 102 017
 219 102 622x Kenani Nshimi
 220 102 776
 221 103 732
 222 105 877

226 107 461
 227 107 553
 228 107 657
 229 108 298
 230 109 218 *Robert Nshimi
 231 109 544
 232 109 967
 233 110 686
 234 111 091
 235 111 510
 236 112 773
 237 113 183
 238 113 444
 239 113 852
 240 114 347
 241 115 125x Chinonyo (Giyah)
 242 115 629
 243 116 229
 244 116 597
 245 117 025
 246 117 349
 247 117 696
 248 117 951
 249 118 641
 250 119 145
 251 119 513
 252 119 927
 253 120 203
 254 120 344
 255 120 718
 256 121 119x Mpsbe
 257 121 513
 258 121 728
 259 122 071
 260 122 368
 261 122 569
 262 122 669
 263 122 919
 264 123 248
 265 123 563
 266 123 807
 267 124 151
 268 125 029
 269 125 351
 270 125 514
 271 126 105
 272 126 367
 273 126 842
 274 127 171x Muraambeti
 275 127 542
 276 127 792
 277 128 589
 278 129 470

284 130 619
 285 131 287
 286 131 584
 287 131 928
 288 132 103
 289 132 933
 290 133 192x
 291 133 526
 292 133 695
 293 134 138
 294 134 467
 295 134 845
 296 135 508
 297 135 730
 298 136 136
 299 136 615
 300 136 968
 301 137 649
 302 138 002
 303 138 683
 304 138 962
 305 139 204x
 306 139 651
 307 140 220
 308 140 714
 309 141 162
 310 141 532
 311 141 642
 312 141 767
 313 142 120
 314 142 795
 315 143 536
 316 143 952
 317 144 915
 318 144 963
 319 145 296x
 320 145 839
 321 146 285
 322 147 336
 323 147 596
 324 147 771
 325 148 018
 326 149 324
 327 149 508
 328 149 998
 329 150 855
 330 151 173x
 331 151 357
 332 151 951
 333 152 182
 334 152 653
 335 152 952
 336 152 285
 337 153 786
 338 153 952

341 155 273
 342 155 406
 343 155 678
 344 156 031
 345 156 131
 346 156 672
 347 156 958
 348 157 279x
 349 157 408
 350 157 564
 351 159 200
 352 159 461
 353 159 733
 354 159 954
 355 160 134
 356 160 547
 357 161 065
 358 161 531
 359 162 054
 360 162 525
 361 162 973
 362 163 337x
 363 164 059
 364 164 539
 365 164 883
 366 166 010
 367 166 271
 368 166 944
 369 167 483
 370 167 638
 371 168 012
 372 169 426x
 373 169 885
 374 170 137
 375 170 264
 376 170 546
 377 171 128
 378 171 972
 379 173 722
 380 174 259

ANNEX C: FINAL KPC SURVEY TEAM- LIST OF PERSONS AND ROLES

Malawi Child Survival Project KPC Survey Participants – July 1-14, 2009

No.	Name	Department	Position
1	Richard Thindwa	World Relief Malawi – TPCSP	Deputy Project Director
2	Joseph Simwaka	Chitipa District Hospital	Environmental Health Intern
3	Thandie Msukwa	World Relief Malawi – TPCSP	Health Promoter
4	Foreward Chilanga	World Relief Malawi – TPCSP	Health Education Supervisor
5	Misheck Mdambo	District Social Welfare	Child Protection Officer
6	Jill M Mtambo	World Relief Malawi – TPCSP	Health Education Supervisor
7	George Nundwe	Chitipa District Hospital	Maternal and Child Health Coordinator
8	Wongani Mulungu	World Relief Malawi – TPCSP	Health Education Supervisor
9	Thomas A Nkhonjera	World Relief Malawi -TPCSP	Health Education Supervisor
10	Paul L Ng'ambi	World Relief Malawi -TPCSP	Health Education Supervisor
11	Mbasa Msiska	World Relief Malawi - TPCSP	Project Accounts Assistant
12	Victor Kabaghe	World Relief Malawi -TPCSP	Project Director
13	Andrew Kasache Banda	World Relief Malawi -TPCSP	Project Driver
14	Isaac Munthali	World Relief Malawi -TPCSP	Project Driver
15	Nelson Mwandwanga	World Relief Malawi -TPCSP	Project Driver
16	Rachel Gondwe	World Relief Malawi -TPCSP	Project Secretary
17	German Phikani	World Relief Malawi -TPCSP	Office Assistant
18	Maureen Mtambo	World Relief Malawi - TPCSP	Health Promoter
19	Alfred Munkhondya	World Relief Malawi - TPCSP	Health Education Supervisor
20	George Mkandawire	World Relief Malawi – Country Office	HIV/AIDS Care and Support Coordinator
21	Benjamin Nyondo	World Relief Malawi – TPCSP	Health Promoter
22	Charles Kapira	World Relief Malawi – TPCSP	Health Promoter
23	Maseso Mwiba	World Relief Malawi - TPCSP	Health Promoter

ANNEX D: INDICATOR TABLE

	BASELINE April 2005			MIDTERM January 2007			FINAL July 2009			EOP TARGET
	Numerator/ Denominator	Percent	Confidence Interval	Numerator/ Denominator	Percent	Confidence Interval	Numerator/ Denominator	Percent	Confidence Interval	
CARE SEEKING KNOWLEDGE										
Percentage of caretakers of children 0-23m who know at least 2 childhood illness danger signs for seeking care immediately (RC)	234/329	71.1%	60.8%-81.4%	266/300	88.7%	84.5%-92.0%	287/300	95.7%	93.3%-98.0%	80%
HOME MANAGEMENT										
Percentage of sick children age 0-23m who received increased fluids and continued feeding during an illness in the past two weeks (RC) Increased fluids Increased or continued foods	12/311	3.9%	0.8%-7.0%	32/180	17.8%	12.5%-24.2%	51/226 66/266 112/266	22.6% 29.2% 49.6%	16.7%-28.4% 21.4%-37.0% 42.3%-56.9%	50%
IMMUNIZATION										
Percentage of all children 12-23m fully immunized (BCG, Polio3, DPT3, and Measles) before 24 months as verified by card. * Baseline includes children 12-23m who had a BCG scar and children 9-11m who had a DPT3, Polio3 and measles vaccine	238/346	68.8%	58.8%-78.8%	86/135	63.7%	55.0%-71.8%	113/154	73.4%	65.5%-81.3%	80%
Percentage of children age 12-23m who are fully vaccinated (against the five vaccine-preventable diseases) before the first birthday (RC) **Baseline includes children 12-23m who had a BCG scar and children 9-11m who had a DPT3, Polio3 and measles vaccine	--	--	--	76/101	75.2%	65.7%-83.3%	99/138	71.7%	64.1%-79.4%	RC
Percentage of children age 12-23m who received a measles vaccine per maternal recall	NA	NA	NA	128/135	94.8%	89.6%-97.9%	142/155	91.6%	86.1%-95.5%	RC
Percentage of children age 9-23m who received a measles vaccine verified by card	191/346	55.2%	45.8%-64.6%	107/167	64.1%	57.6%-70.6%	133/147	74.3%	66.3%-82.3%	NA
MALARIA										
Percentage of children age 0-23m who slept under an insecticide-treated net the previous night (RC) **Baseline includes all nets regardless of insecticide treatment	66/161	41.0%	28.5%-53.5%	119/300	39.7%	34.1%-45.4%	131/300	43.7%	36.9%-50.4%	60%
Percentage of net ownership	--	44.2%	--	167/300	55.1%	49.8%-61.4%	264/300	88.0%	83.5%-92.5%	NA

Percentage of children 0-23m who slept under an ITN the previous night, of those who own nets	--	--	--	119/167	71.3%	63.8%-78.0%	131/264	49.6%	42.0%-57.3%	NA
Percentage of children 0-23m with suspected malaria in the previous 2 weeks who sought treatment from a trained provider within 24 hours of illness onset	--	17.5%	--	36/87	41.4%	30.9%-52.4%	40/96	41.7%	29.6%-53.7%	50%
PNEUMONIA CASE MANAGEMENT										
Percentage of children 0-23m with rapid/difficult breathing (suspected pneumonia) in the previous 2 weeks who sought treatment from a trained provider within 24 hours	39/187	20.9%	16.7%-25.1%	9/29	31.0%	15.3-50.8%	11/25	44.0%	24.9%-63.1%	50%
CONTROL OF DIARRHEAL DISEASE										
Percentage of children 0-23m with diarrhea in the previous 2 weeks who received ORT (home available fluids, ORS, or breastfeeding) Including treatment at HF	--	8%	--	28/48 31/48	58.3% 64.6%	43.2%-72.4% 49.5%-77.8%	58/90 74/90	64.4% 82.2%	52.8%-76.1% 73.9%-90.5%	60%
Percentage of mothers with children age 0-23m who report that they wash their hands with soap/ash before food preparation, before feeding children, after defecation, and after attending to a child who has defecated (RC) *Baseline from LRA1	11/284	3.9%	2.3%-5.5%	37/300	12.3%	8.8%-16.6%	58/300	19.3%	15.0%-23.7%	60%
Percentage of caretakers with children 0-23m who reported and washing with soap or ash										
After Defecation				225/300	75.0%	69.7%-79.8%	257/300	85.7%	81.7%-89.7%	
Before eating				191/300	63.7%	57.9%-69.1%	213/300	71.0%	66.0%-89.7%	
Before feeding a child	--	--	--	64/300	21.3%	16.8%-26.4%	114/300	38.0%	32.8%-43.2%	NA
After helping a child who has def.				157/300	52.3%	46.5%-58.1%	205/300	68.3%	61.5%-75.2%	
Food preparation				130/300	43.3%	37.6%-49.1%	167/300	55.7%	50.8%-60.5%	
4/5 times listed above				NA	NA	NA	165/300	55.0%	49.3%-60.7%	
All 5 times				26/300	8.7%	5.7%-12.4%	45/300	15.0%	11.1%-18.9%	
NUTRITION										
Percentage of children 0-5m who were exclusively breastfed during the last 24 hours (RC)	20/50	40.0%	17.8%-17.8%	85/101	84.2%	75.6%-90.7%	55/69	79.7%	69.8%-89.6%	60%
Percentage of children 6-9m who received breastmilk and complementary foods during the last 24 hours (RC)	78/196	39.8%	28.6%-51.0%	33/41	80.5%	65.1%-91.2%	52/61	85.2%	76.0%-94.5%	70%
Percentage of children 6-11m who received at least 1 dose of Vitamin A and children 12-23m who received at least 2 doses of Vitamin A in the previous 12 months, as evidenced by card	--	--	--	22/199	11.1%	4.9%-17.3%	15/231	6.5%	2.0%-11.0%	60%

Percentage of children 6-23m who received VitA within the past 6 months per maternal recall	--	--	--	189/199	95.0%	91.0%-97.6%	206/231	89.2%	84.8%-93.6%	NA
Percentage of malnourished children who completed 12 days of Hearth achieve adequate (200g) or catch-up (400g) growth for at least 2 months after Hearth	Can not be calculated from the KPC	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIV/AIDS PREVENTION										
Percentage of mothers with children age 0-23m who cite at least two known ways of reducing the risk of HIV infection (RC)	243/360	67.5%	60.7%-74.3%	230/300	76.5%	71.5%-81.3%	257/300	85.7%	81.7%-89.7%	80%
Percentage of children age 0-23m whose births were attended by skilled health personnel (RC)	201/364	55.2%	46.0%-64.4%	183/300	61.0%	55.2%-66.6%	218/300	72.7%	64.9%-80.4%	70%
RAPID CATCH (NOT INCLUDED AS PROGRAM GOALS)										
Percentage of children age 0-23m who are underweight (-2SD from the median weight-for-age, according to the WHO/NCHS reference population)	108/361	29.9%	46.0%-22.5%	31/298	10.4%	7.2%-14.4%	45/297	15.2%	11.2%-19.1%	RC
Percentage of children age 0-23m who were born at least 24 months after the previous surviving child **Baseline is from 2006 monitoring survey	130/329	39.5%	30.9%-48.1%	116/139	83.5%	76.2%-89.2%	145/166	87.3%	81.3%-93.4%	RC
Percentage of mothers with children 0-23m who received at least two tetanus toxoid injections before the birth of their youngest child **Includes 2TT verified by card Of those mothers with cards	233/364 233/278	64.0% 83.8%	54.4%-73.6% 77.7%-89.9%	155/300 155/188	53.0% 82.4%	47.2%-58.8% 76.2%-87.6%	178/300 173/187	59.3% 92.5%	51.7%-66.9% 88.2%-96.8%	RC
OTHER ANALYSIS										
Percentage of caretakers with children 0-23mo who were visited by a volunteer:										
Last two weeks	--	--	--	138/300	46.0%	40.3-51.8%	52/300	17.3%	13.2%-22.1%	NA
Last month	--	--	--	--	--	--	75/300	25.0%	18.7%-31.3%	
Over a month ago	--	--	--	--	--	--	96/300	32.0%	26.8%-37.6%	
Never (MT "Not visited")	--	--	--	97/300	32.3%	27.1%-37.9%	77/300	25.7%	20.8%-31.0%	
Percentage of caretakers with children 0-23m who reported treating their water in any way to make it safer to drink	--	--	--	150/300	50.0%	44.2%-55.8%	210/300	70.0%	60.7%-79.3%	NA

Percentage of mothers with children 0-23m who recalled attending antenatal checkups at the Health Center										
At least once	--	--	--	284/300	94.7%	91.5%-96.9%	297/300	99.0%	97.5%-100%	NA
Three or more times				226/300	75.3%	70.1%-80.1%	241/300	80.3%	75.2%-85.5%	
Four or more times				133/300	44.3%	38.6%-50.2%	139/300	46.3%	38.8%-53.8%	
Never				0	0%	0%	3/300	1.0%	0%-2.5%	
Don't remember				3/300	1.0%	0.2%-2.9%	0	0%	--	
Percentage of mothers with children 0-23m and with antenatal cards who had two or more verified doses of SP during her last pregnancy	162/278	58.2%	50.0%-66.4%	130/188	69.1%	62.0%-75.7%	134/187	71.7%	65.3%-78.1%	NA
Percentage of mothers with children 0-23m who recalled taking iron supplements during her last pregnancy	310/364	85.2%	80.0%-90.4%	259/300	86.3%	81.9%-90.0%	265/300	88.3%	84.8%-91.9%	NA
Age Distribution of mothers										
Under 25 years							133/300	44.3%	38.4%-50.3%	NA
25+ years							167/300	55.7%	49.7%-61.6%	
16-19	--	--	--	--	--	--	30/300	10.0%	6.6%-13.4%	
20-29							169/300	56.3%	49.8%-62.9%	
30-39							93/300	31.0%	24.4%-37.6%	
40-49							8/300	2.7%	1.0%-4.3%	
Age Distribution of children										
0-5m							69/300	23.0%	17.4%-27.1%	NA
6-9m	--	--	--	--	--	--	61/300	20.3%	16.5%-26.1%	
6-11m							77/300	25.7%	21.4%-31.7%	
12-23m							154/300	51.3%	45.9%-57.4%	
Gender of children										
Female	--	--	--	--	--	--	143/300	47.7%	42.4%-52.9%	NA
Male							157/300	52.3%	47.1%-57.6%	
Number of children 0-60m living in the same household										
One	--	--	--	--	--	--	132/300	44.0%	37.4%-50.6%	NA
Two							155/300	51.7%	45.8%-57.6%	
Three							10/300	3.3%	1.5%-5.1%	
Four							3/300	1.0%	0-2.1%	

ANNEX E: RAW DATA TABLES

DEMOGRAPHIC INFORMATION

Maternal Age

	<i>Frequency</i>	<i>Percent</i>
25+ years old	167	55.7%
Under 25 years old	133	44.3%
Total	300	100.0%
16 - 19	30	10.0%
20 - 29	169	56.3%
30 - 39	93	31.0%
40 - 49	8	2.7%
Total	300	100.0%

Number of children living in the same household

	<i>Frequency</i>	<i>Percent</i>
1	132	44.0%
2	155	51.7%
3	10	3.3%
4	3	1.0%
Total	300	100.0%

How many biological children are living with you?

	<i>Frequency</i>	<i>Percent</i>
1	134	44.7%
2	158	52.7%
3	8	2.7%
Total	300	100.0%

Child Age Distribution

	<i>Frequency</i>	<i>Percent</i>
>0 - 5	66	22.0%
>10 - 11	16	5.3%
>12 - 23	155	51.7%
>6 - 9	63	21.0%
Total	300	100.0%

BREASTFEEDING AND COMPLEMENTARY FEEDING

Are you breastfeeding (name of child) now?

	<i>Frequency</i>	<i>Percent</i>
--	------------------	----------------

No	20	6.7%
Yes	280	93.3%
Total	300	100.0%

Have you ever breastfeed (name of child)?

	<i>Frequency</i>	<i>Percent</i>
No	1	5.0%
Yes	19	95.0%
Total	20	100.0%

How long after birth did you first put (name of child) to the breast?

	<i>Frequency</i>	<i>Percent</i>
E. Immediately/within first hour	237	79.3%
F. After the first hour after delivery	46	15.4%
G. After eight hours after delivery	14	4.7%
H. Don't know	2	0.7%
Total	299	100%

What types of liquids and foods did (name of child) consume yesterday during the day or at night?

	<i>Yes</i>	<i>Percent</i>	<i>No</i>	<i>Percent</i>
Breastmilk	276	92.0%	24	8.0%
Plain water	166	55.3%	134	44.7%
Other liquids	96	32.0%	204	68.0%
Mashed, pureed, solid, or semi-solid foods	217	72.3%	83	27.7%
Other	12	4.0%	288	96.0%

ILLNESS RECOGNITION AND CARE SEEKING

What are the signs of illness that would indicate your child needs treatment?

	<i>Yes</i>	<i>Percent</i>	<i>No</i>	<i>Percent</i>
Don't know	0	0%	300	100%
Looks unwell or not playing normally	158	52.7%	142	47.3%
Not eating, drinking, or breastfeeding	181	60.3%	119	39.7%
Lethargic or difficult to wake	51	17.0%	249	83.0%
Fever	280	93.3%	20	6.7%
Fast or difficult breathing	64	21.3%	236	78.7%
Vomits everything	134	44.7%	166	55.3%
Convulsions	27	9.0%	273	91.0%
Gets worse despite home care	5	1.7%	295	98.3%
Looks dehydrated (dry mouth or no tears)	33	11.0%	267	89.0%
Other	154	51.3%	146	48.7%

Did (name of child) experience any of the following in the past two weeks?

	<i>Yes</i>	<i>Percent</i>	<i>No</i>	<i>Percent</i>
Diarrhea	90	30.0%	210	70.0%
Diarrhea ≤ 3 times	32	35.6%	58	64.4%
Diarrhea > 3 times	52	57.8%	38	42.2%
Missing	6	6.7%	84	93.3%
Blood in stool	2	0.7%	298	99.3%
Cough	175	58.3%	125	41.7%
Rapid or difficult breathing	25	8.3%	275	91.7%
Fever	90	30.0%	210	70.0%
Malaria	40	13.3%	260	86.7%
Convulsions	9	3.0%	291	97.0%
Other	8	2.7%	292	97.3%
None	74	24.7%	226	75.3%

When (name of child) was sick, was he/she offered less than usual to drink, about the same amount, or more than usual to drink?"

	<i>Frequency</i>	<i>Percent</i>
A. Less than usual	82	36.3%
B. Same amount	78	34.5%
C. More than usual	66	29.2%
Total	226	100.0%

When (name of child) was sick, was he/she offered less than usual to eat, about the same amount, or more than usual to eat?"

	<i>Frequency</i>	<i>Percent</i>
D. Less than usual	114	50.4%
E. Same amount	65	28.8%
F. More than usual	47	20.8%
Total	226	100.0%

DIARRHEA

When (name of child) had diarrhea, did you give the child anything?"

	<i>Yes</i>	<i>Percent</i>	<i>No</i>	<i>Percent</i>
Nothing	8	8.9%	82	91.1%
ORS Sachet	33	36.7%	57	63.3%
Sugar-salt Solution	5	5.6%	85	94.4%
Cereal based ORT (rice/maize water)	1	1.1%	89	98.9%
Breastmilk	36	40.0%	54	60.0%

Water	10	11.1%	80	88.9%
Other available drinks	7	7.8%	83	92.2%
Medication for diarrhea	18	20.0%	72	80.0%
Take child to the hospital/clinic	32	35.6%	58	64.4%
Other	19	21.1%	71	78.9%

PNEUMONIA

Did you seek treatment for your child with rapid or difficult breathing?

	<i>Frequency</i>	<i>Percent</i>
No	7	29.2%
Yes	17	70.8%
Total	24	100.0%

From whom did you seek treatment when (name of child) had difficulty in breathing?

	<i>Yes</i>	<i>Percent</i>	<i>No</i>	<i>Percent</i>
Hospital	1	4.0%	24	96.0%
Health Center/Health Post	13	52.0%	12	48.0%
Injectionist	0	0%	25	100%
Traditional Birth Attendant	1	4.0%	24	96.0%
Traditional Healer	0	0%	25	100%
Pharmacy/Shop	1	4.0%	24	96.0%
Relatives/Friends	0	0%	25	100%
Others	1	4.0%	24	96.0%

How soon after the difficulty in breathing began did (name of child) receive treatment?

	<i>Frequency</i>	<i>Percent</i>
Less than one day (within 24 hours)	11	78.6%
After one day (24-28 hours)	2	14.3%
Two days or more	1	7.1%
Don't know	0	0%
Total	14	100%

MALARIA CONTROL

When (name of child) had fever, what treatment did you give?

	<i>Frequency</i>	<i>Percent</i>
Take the child to the hospital or HC	52	54.7%
Home treatment	32	33.7%
We the child to decrease fever	1	1.1%
Other	10	10.5%
Total	95	100.0%

How soon after the fever started was (name of child) treated at the hospital or health center?

	<i>Frequency</i>	<i>Percent</i>
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Less than one day (within 24 hours)	40	76.9%
After one day (24-28 hours)	7	13.5%
Two days or more	5	9.6%
Total	52	100.0%

Did (name of child) take any drugs for the fever?

	<i>Frequency</i>	<i>Percent</i>
No	12	12.6%
Yes	83	87.4%
Total	95	100.0%

What drugs did (name of child) take?

	<i>Frequency</i>	<i>Percent</i>
SP/Fansidar	10	15.4%
LA	15	23.1%
Amodiaquine	1	1.5%
Quinine	1	1.5%
Other	38	58.5%
Total	65	100.0%

When did (name of child) take the drugs for the fever?

	<i>Frequency</i>	<i>Percent</i>
Less than one day (within 24 hours)	69	83.1%
After one day (24-28 hours)	7	8.4%
Two days or more	7	8.4%
Total	83	100.0%

MALARIA PREVENTION

Do you have any mosquito nets in your house? IF YES, ASK: Can I see it?

	<i>Frequency</i>	<i>Percent</i>
Yes (Net seen hanging)	131	43.7%
Yes (Net seen, but not hanging)	121	40.3%
Yes (Net NOT seen)	12	4.0%
No	36	12.0%
Total	300	100.0%

Who slept under a mosquito net last night?

	<i>Yes</i>	<i>Percent</i>	<i>No</i>	<i>Percent</i>
Child	143	47.7%	157	52.3%
Respondent	143	47.7%	157	52.3%
Other(s)	63	21.0%	237	79.0%
Did not use a net	120	40.0%	180	60.0%

Was the mosquito net ever soaked or dipped in a liquid to repel mosquitoes or bugs?

	<i>Frequency</i>	<i>Percent</i>
Yes, within the past 6 months	157	59.5%
Yes, within the past 1 year	33	12.5%
No	58	22.0%
Long-lasting net	16	6.1%
Total	264	100.0%

GROWTH MONITORING

Does (name of child) have a growth monitoring card?

	<i>Frequency</i>	<i>Percent</i>
Yes, card is seen by interviewer	264	88.3%
Yes, but card is missing or lost	29	9.7%
No	6	2.0%
Total	299	100.0%

Has the child been weighed in the last 4 months?

	<i>Frequency</i>	<i>Percent</i>
No	15	5.7%
Yes	247	93.6%
Missing	2	0.8%
Total	264	100.0%

May I weigh (name of child)?

	<i>Frequency</i>	<i>Percent</i>
Missing	1	0.3%
No	2	0.7%
Yes	297	99.0%
Total	300	100.0%

IMMUNIZATIONS

Did (name of child) ever receive an injection in the leg to prevent measles?

	<i>Frequency</i>	<i>Percent</i>
No	13	8.4%
Yes	142	91.6%
Total	155	100.0%

Did (name of child) receive a Vitamin A dose in the last 6 months?

	<i>Frequency</i>	<i>Percent</i>
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No	27	11.5%
Yes	207	88.5%
Total	234	100.0%

Do you have a card or health passbook where (name of child)'s vaccinations are written down?

	<i>Frequency</i>	<i>Percent</i>
Yes, card seen by interviewer	265	88.3%
Yes, but card is missing or lost	30	10.0%
No, never had a card	5	1.7%
Total	300	100.0%

WATER AND SANITATION

Do you treat your water in any way to make it safer for drinking?

	<i>Frequency</i>	<i>Percent</i>
No	90	30.0%
Yes	210	70.0%
Total	300	100.0%

If yes, what do you usually do to the water to make it safer to drink?

	<i>Yes</i>	<i>Percent</i>	<i>No</i>	<i>Percent</i>
Let it stand and settle/ sedimentation	4	1.9%	206	98.1%
Strain it through cloth	3	1.4%	207	98.6%
Boil	22	10.5%	188	89.5%
Add bleach/chorine/Waterguard	197	93.8%	13	6.2%
Water filter (ceramic, sand, composite)	2	1.0%	208	99.0%
Solar disinfection	0	0%	210	100%
Other	3	1.4%	207	98.6%
Don't know	0	0%	210	100%

When do you wash your hands?

	<i>Yes</i>	<i>Percent</i>	<i>No</i>	<i>Percent</i>
Never	0	0%	300	100%
Before food preparation	183	61.0%	117	39.0%
Before feeding a child	126	42.0%	174	58.0%
After defecation/ visiting the toilet	290	96.7%	10	3.3%
After attending a child who has defecated	224	74.7%	76	25.3%
Before eating	243	81.0%	57	19.0%
Other	53	17.7%	247	82.3%

Do you use soap or ash when washing your hands?

	<i>Frequency</i>	<i>Percent</i>
No	36	12.0%

Yes	264	88.0%
Total	300	100.0%

Ask to see the soap or other substance used for handwashing.

	<i>Frequency</i>	<i>Percent</i>
Soap observed	217	72.3%
Soap Substitute observed	5	1.7%
Soap NOT observed	44	14.7%
Missing	34	11.3%
Total	300	100.0%

MATERNAL AND NEONATAL HEALTH

When you were pregnant with (name of child) did you go to the health center for antenatal checkups? If yes, how many times?

	<i>Frequency</i>	<i>Percent</i>
Yes, once	18	6.0%
Yes, twice	38	12.7%
Yes, three times	102	34.0%
Yes, four or more times	139	46.3%
No	3	1.0%
Don't know	300	100.0%

While you were pregnant with (name of child) did you receive an antenatal health card?

	<i>Frequency</i>	<i>Percent</i>
Yes, card seen by interviewer	187	62.3%
Yes, card is not seen by interviewer	88	29.3%
No	23	7.7%
Missing	2	0.7%
Total	298	100.0%

How many tetanus injections did the mother receive according to the card?

	<i>Frequency</i>	<i>Percent</i>
None	3	1.6%
One	11	5.9%
Two	33	17.6%
More than two	140	74.9%
Total	187	100.0%

How many tetanus injections did the mother receive according to the card?

	<i>Frequency</i>	<i>Percent</i>
Missing	1	0.5%

None	4	2.1%
One	48	25.7%
Two	107	57.2%
More than two	27	14.4%
Total	187	100.0%

Did you take iron tablets daily during your last pregnancy?

	<i>Frequency</i>	<i>Percent</i>
No	32	10.8%
Yes	265	89.2%
Total	297	100.0%

Who assisted you with (name of child) delivery?

	<i>Frequency</i>	<i>Percent</i>
Doctor	14	4.7%
Nurse/Midwife	204	68.0%
Traditional birth attendant	29	9.7%
Family member or friend	37	12.3%
Other	15	5.0%
No One	1	0.3%
Total	300	100%

After (name of child) was born, did any health care provider or traditional birth attendant check on (name of child's) health?

	<i>Frequency</i>	<i>Percent</i>
Don't know	3	1.0%
No	21	7.0%
Yes	274	91.9%
Total	298	100.0%

Who checked on (name of child's) health at that time?

	<i>Frequency</i>	<i>Percent</i>
Doctor	23	8.4%
Nurse/Midwife	203	74.1%
Traditional birth attendant	21	7.7%
Family member or friend	14	5.1%
Other	13	4.7%
No One	0	0%
Total	274	100%

How long after the birth of (name of child) did the first check take place?

	<i>Frequency</i>	<i>Percent</i>
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Less than one day (within 24 hours)	242	88.3%
After one day (24-48 hours)	19	6.9%
Two days or more	10	3.6%
Don't know	3	1.1%
Total	274	100.0%

HIV/AIDS

Have you ever heard of HIV/AIDS?

	<i>Frequency</i>	<i>Percent</i>
No	3	1.0%
Yes	293	99.0%
Total	296	100.0%

What can a person do to avoid getting AIDS or the virus that causes AIDS?

	<i>Yes</i>	<i>Percent</i>	<i>No</i>	<i>Percent</i>
Abstain from sex	198	67.6%	95	32.4%
Use condoms	199	67.9%	94	32.1%
Limit sex to one partner/Stay faithful to one partner	183	62.5%	110	37.5%
HIV Testing and Counseling/VCT	60	20.0%	240	80.0%
Limit number of sexual partners	20	6.7%	280	93.3%
Avoid sex with prostitutes	28	9.3%	272	90.7%
Avoid sex with persons who have many partners	7	2.4%	286	97.6%
Avoid intercourse with persons of the same sex	2	0.7%	298	99.3%
Avoid sex with persons who inject drugs intravenously	0	0%	300	100%
Avoid blood transfusions	17	5.8%	276	94.2%
Avoid injections	63	21.0%	237	79.0%
Avoid sharing razors, blades	161	53.7%	139	46.3%
Avoid kissing	5	1.7%	295	98.3%
Avoid mosquito bites	1	0.3%	299	99.7%
Seek protection from traditional healer	0	0%	300	100%
Nothing	1	0.3%	299	99.7%
Other	23	7.7%	277	92.3%
Doesn't know	1	0.3%	292	99.7%

SUSTAINABILITY

When did World Relief/Tube Poke volunteer visit you?

	<i>Frequency</i>	<i>Percent</i>
Last week	30	10.0%
Past two weeks	22	7.3%
Past three weeks	19	6.3%
Past four weeks	56	18.7%
Never	77	25.7%
Other	96	32.0%

Total	300	100.0%
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ANNEX F: TRAINING SCHEDULE AND REQUIRED RESOURCES

The training schedule for supervisors and interviewers

DATE	ACTIVITY	RESPONSIBLE PERSONS
22 – 30 June 2009	Planning for the survey activity with Country office	Project Management; Director of Programs; Country office Finance and Administration
01 July 2009	Health Promoters, and supervisors from Nthalire, Wenya and Misuku arrive at the project office	Rachel Gondwe; Mbaso Msiska and German Phikani
02 -03 July 2009	Survey Team meet to plan and review the survey tool	Project Directors; Survey Team Members
04 July 2009	Survey Team split into three and go for field pre-testing	Project Directors
5 July 2009	Survey teams leave for data collection.	ALL
6-11 July 2009	<ul style="list-style-type: none"> ▪ Data Collection ▪ Setting up data entry equipment ▪ Data entry also commences 	Survey teams; Data entry clerks; Project Director (supervising the process)
13 July 2009	Review meeting to share field experiences and very preliminary results	Project Director, Survey Teams.
14-15 July 2009	Sharing the KPC Survey Files with MCH Specialist	Project Director
16-30 July 2009	In-depth data analysis and report writing	MCH Specialist; Project Directors

Project resource requirements of the survey, namely monetary costs and amount of staff time devoted to KPC activities

The total budget for the survey was MK 800.000 (US\$6,430)

Monetary costs include: stationary (printing survey questionnaires, purchasing note pads and pens) and three vehicles and all motor cycles which were used for community mobilization.

Staff time requirements: During planning, the day commenced at 08.00 hours and ended at or after 17.30 hours while in the field the day was much longer up to 17.45 in most cases. This was so because of the difficulties in finding children 0-23 months of age.

