
# Final report: Evaluation of NICHE in the first 1,000 days of a child's life in Kitui and Machakos counties, Kenya

Kimetrica™
INCREASING THE EFFECTIVENESS OF SOCIAL SPENDING

unicef
for every child

October 2018

# Final report: Evaluation of NICHE in the first 1,000 days of a child's life in Kitui and Machakos counties, Kenya

Helen Guyatt, PhD
Matthew Klick, PhD
Florence Muiruri
Flavia Della Rosa

This evaluation was commissioned by UNICEF Kenya and conducted by Kimetrica Limited.

Kimetrica Limited

P.O. Box 1327, Village Market 00621
Nairobi, Kenya
Tel: +254 (020) 201 8156

80 Garden Centre, Suite A-368
Broomfield, CO 80020
Tel: +1 303 997 0336

www.kimetrica.com

# ACKNOWLEDGEMENTS

This study of the NICHE programme was commissioned by UNICEF Kenya and its partners. We extend our gratitude to Ann Robins, Grainne Moloney and Patrick Codjia of the UNICEF Kenya Nutrition Unit for their coordination and facilitation, Humphrey Mosomi, the Nutrition Support Officer (UNICEF), for his support during the fieldwork at all stages of this evaluation, Ousmane Niang, Luis Corral, Susan Momanyi and Yves Dublin of the UNICEF Kenya Social Protection Unit, David Kamau of the World Food Programme, Cecila Mbaka (Head of Social Protection Secretariat), Richard Obiga of the Social Protection Secretariat, Daniel Musembi and Salome Muthama (County Coordinators Kitui and Machakos counties), Samuel Ochieng (Deputy county coordinator Machakos), Jackson Matheka and Mary Makau (Nutrition officers Kitui and Machakos), and Veronica Mwangangi (County community strategy focal point Machakos county), and Nancy Njoki and Benson Nderitu of Population Services Kenya--for their collaboration and valuable contribution.

# TABLE OF CONTENTS

# LIST OF TABLES

# LIST OF FIGURES

# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| ANC | Antenatal Care |
| BLF | Beneficiary Learning Forums |
| CFA | Cash for Assets |
| CHVs | Community Health Volunteers |
| CONSORT | Consolidated Standards of Reporting Trials |
| CT-OVC | Cash Transfer for Orphans and Vulnerable Children |
| DiD | Difference-in-Difference |
| EU | European Union |
| FCS | Food Consumption Score |
| FGD | Focus Group Discussions |
| GoK | Government of Kenya |
| HAZ | Height-for-Age |
| IDI | In-Depth Interviews |
| IMC | International Medical Corps |
| IYCF | Infant and Young Child Feeding |
| Ksh | Kenya Shillings |
| MAM | Moderate Acute Malnutrition |
| MUAC | Mid-Upper Arm Circumference |
| NICHE | Nutritional Improvements through Cash and Health Education |
| ORS | Oral Rehydration Salts |
| PSK | Population Services Kenya |
| RCT | Randomized Control Trial |
| SAM | Severe Acute Malnutrition |
| SHARE | Supporting Horn of Africa Resilience |
| SMS | Short Message Service |
| UNEG | United Nations Evaluation Group |
| UNICEF | United Nations Children's Fund |

| | |
|---|---|
| WASH | Water, Sanitation and Hygiene |
| WAZ | Weight-for-Age |
| WFP | World Food Programme |
| WHO | World Health Organization |
| WHZ | Weight-for-Height |

# EXECUTIVE SUMMARY

## BACKGROUND AND OBJECT OF RESEARCH

The Nutritional Improvements through Cash and Health Education (NICHE) programme is a United Nations Children's Fund (UNICEF)-led initiative in Kitui and Machakos counties with the aim of improving the nutritional status of children during their first 1,000 days of life, beginning in utero through the second year of life outside of the womb. The programme consists of providing intense nutritional counselling through community health volunteers (CHVs) and an additional cash top-up to households that are already recipients of the Government of Kenya's Cash Transfer for Orphans and Vulnerable Children (CT-OVC) and that have a pregnant woman or a child under the age of two. This report constitutes an evaluation of the NICHE programme.

Previous studies have found that cash transfers can have a positive effect on increasing food consumption, food security, dietary diversity, and infant and young child feeding. However, while some studies of cash transfer programmes have been able to detect a measurable difference in child stunting, many have not been able to detect effects on child anthropometric outcomes. However, studies of interventions entailing both nutritional counselling and cash transfers have shown that combining these can decrease stunting, underweight and wasting among children. These findings support the underlying premise of NICHE: that providing additional cash and health information will facilitate positive behaviour change that will reduce malnutrition, stunting and wasting among children in targeted households.

## OBJECTIVES AND SCOPE

The objective of this evaluation is to assess causal linkages between the NICHE programme and expected outcomes such as improvements in growth, food consumption and positive health, nutrition and hygiene behaviours. Research questions centred on the programme's *effectiveness, efficiency* and *relevance.*

## METHODOLOGY

The primary research instrument in this study is a panel household survey structured as a randomized control trial, designed to compare between treatment and control groups. The sample population was drawn from existing CT-OVC cash beneficiary households that had a pregnant woman and/or child aged 0-24 months. Several challenges on the ground, including significant loss to follow-up due to migration, falsification of data and delays in the rollout of the interventions, necessitated changes to the initial design of the survey. In the end, two baseline surveys (one in Kitui county and one in Machakos), three midline surveys and an end line survey were conducted between January 2017 and June 2018. Interviews during the end line were conducted in 794 households, 401 in the treatment arm and 394 in the control arm.

The interventions the treatment groups received were an additional 500 to 1000 Ksh per month, depending on the number of children or pregnant women in the household, in addition

to the CT-OVC transfer of 2,000 Ksh per month, and nutritional counselling through household visits by CHVs.

The questionnaire was designed to gather information on: household composition; characteristics of participating children and pregnant women including health status, health visits, food consumption, and anthropometric data; receipt and use of cash transfers and nutritional counselling; household livelihoods, income and wealth; food accessibility; and coping strategies. The end line survey also collected information on the reasons behind enrolment in the CT-OVC programme, household WASH practises, nutritional knowledge gained through the nutritional counselling, and challenges encountered with NICHE.

The primary outcome measures of the study are the prevalence of stunting, wasting and underweight. Changes in these were to be identified by detecting differences in z-scores over time between treatment and control groups. Secondary outcomes include infant and young child feeding practises, pregnant woman and mother feeding practises, WASH practises, use of health services, general health of the child, stress levels, food intake, and household coping strategies. Data for primary and secondary outcomes were examined using Difference-in-Differences (DiD) models.

In addition to the panel survey, the evaluation also includes qualitative data gleaned from seven focus group discussions (FGDs) and seven in-depth interviews with beneficiaries to understand the experience of NICHE participants, and programme strengths and weaknesses. The qualitative tool centred on the themes of relevance, effectiveness, and efficiency.

## RESULTS

Data and findings suggest that NICHE has had, over the course of a relatively short time span and with complications in its implementation, a direct effect on the health and well-being of children under 24 months, pregnant women and caregivers, though effects are small and variegated. NICHE was unable, over the course of the study, to measurably impact stunting, wasting and underweight among young children, though z-score coefficients were positive. Similarly, global models testing for the relationship between a broad scope of intermediate outcomes and variables reflecting caregiver health, household nutrition and household sanitary practices, were not statistically significant.

However, individual variables within those models were routinely significant, and the incremental effect of cash and counselling combined, in DiD logistic regressions, revealed near-universally positive outcomes among the treatment group. While some improvements were smaller, such as an increased probability of exclusive breastfeeding (7 percent) and initiating breastfeeding early (8 percent), others were much larger, including the probability of obtaining a minimum acceptable diet (44 percent), having a household handwashing facility (29 percent) and treating drinking water (40 percent).

Qualitative data further reinforce these positive findings. The FGDs revealed that beneficiaries found nutritional counselling to be relevant. Beneficiaries reported making behaviour changes, such as feeding their children a balanced diet, exclusively breastfeeding for six months, and unexpectedly, planting kitchen gardens and noting subsequent health benefits.

However, beneficiaries voiced some problems accessing the cash, and faced some challenges due to the current distribution system through banks. They also unanimously reported that the cash top-up was not enough to meet their needs. Beneficiaries reported that they were prevented from making some behaviour changes, particularly those with higher costs such as constructing latrines, due to insufficient cash to implement them. They also voiced a need for better communication from implementers when they faced problems with the programme and from CHVs regarding the timing of their visits.

## DISCUSSION

Qualitative and quantitative findings from this evaluation, when taken together, indicate positive early outcomes on household and child nutrition and welfare stemming directly from NICHE. Although the quantitative data show few statistically significant results, the results are nonetheless positive, and their scale is not surprising given the delays in programme implementation and complications of the data themselves. These results suggest that the combined effect of NICHE cash top-ups and nutritional counselling is translating into tangible outcomes at the household level, all else equal. Qualitative data echoes these positive findings, with beneficiaries viewing the programme as effective and useful.

## CONCLUSIONS

This evaluation found that counselling and cash transfers, coupled as they are in NICHE, improved well-being for participating households. Although little progress was made in changes to z-scores for child stunting, wasting and underweight among children, the consistency with which treatment households perform better (sometimes far better) across a diverse range of household behaviours and characteristics suggests that NICHE could have significant impacts on these more challenging fronts, should NICHE be sustained or scaled-up.

## LESSONS LEARNT AND RECOMMENDATIONS

Based on the lessons learned from this evaluation, we propose the following main recommendations for the cash transfer and nutritional counselling components of the NICHE programme:

- Improve communication to beneficiaries, particularly about how to access cash, to ensure better uptake of activities.
- Consider alternative cash distribution methods, such as sending cash through mobile phones, to avoid the time and travel costs for beneficiaries to collect cash.
- Consider providing cash on a monthly rather than bi-monthly basis.
- Increase the number of beneficiary learning forums and conduct them closer to targeted households to increase attendance and uptake of nutritional messages.
- Improve communication to beneficiaries about the timing of CHV visits.
- Provide support to households in dry areas to grow kitchen gardens, such as lessons on safe water storage and appropriate garden site locations through CHV visits.
- Encourage participation of male household members in nutritional counselling sessions as they are often key decision-makers in how money is spent.

# BACKGROUND AND OBJECT OF RESEARCH

## THE NICHE PROGRAMME

The Nutritional Improvements through Cash and Health Education (NICHE) programme is a United Nations Children's Fund (UNICEF)-led initiative funded under European Union (EU) Supporting Horn of Africa Resilience (SHARE), implemented in partnership with the county government of Kitui and the Government of Kenya (GoK). It was later expanded to include neighbouring Machakos county, initially to three sub-counties bordering Kitui during the first baseline survey —Yatta, Masinga and Mwala—and then to the rest of the county in a second baseline survey. These counties are part of Kenya's arid and semi-arid lands and are located approximately 160 km southeast of Nairobi. Kitui, the eighth-largest county in the country, covers an area of more than 30,000 $km^2$ including more than 6,000 $km^2$ occupied by Tsavo East National park. It was chosen for the implementation of NICHE given its historically-high levels of stunting and malnutrition. Machakos county covers an area of almost 6,000 $km^2$.

NICHE was designed to measurably improve the nutritional status of children in the first 1,000 days of life. This entails 270 days in utero and the first two years of life outside the womb. NICHE provides intense nutritional counselling and additional cash to households that are already recipients of the Government of Kenya (GoK) Cash Transfer for Orphans and Vulnerable Children (CT-OVC) programme and have a pregnant woman or a child under the age of two. Implementation of the first phase of the NICHE programme began in March 2017 and ran until June 2018.

CT-OVC households receive 4,000 Ksh (about USD 40) every two months through bank transfers using Equity Bank and Kenya Commercial Bank. NICHE provides an additional 500 Ksh (about USD 5) per target child under two and/or pregnant woman, up to a maximum of 1,000 Ksh (about USD 10) per household per month. The additional cash is delivered through the same channels as CT-OVC payments. Targeted households also receive nutritional counselling from Community Health Volunteers (CHVs). Through household visits, CHVs deliver specific messages to encourage the following: exclusive breastfeeding for children under six months, the use of Oral Rehydration Salts (ORS) and zinc to manage diarrhoea, intake of vitamin A supplements for children, complementary feeding and dietary diversity, intake of iron and folic acid supplementation for pregnant women and good water, and enhanced sanitation and hygiene (WASH) practices.

The roles of the key stakeholders were defined at the beginning of the project and adapted during implementation. The Government of Kenya (GoK) Department of Children Services (DCS) provided a platform for implementing the project through the CT-OVC program. The county Ministry of Health and Sanitation delivered health and nutrition services in health facilities and communities, supported the development of communication materials, and participated in joint monitoring. UNICEF provided technical and financial support to partners (Population Services Kenya and International Medical Corps) to support the Ministry of Health and Department of Children Services in implementing the project.

CHVs were trained by Population Services Kenya (PSK), and the messages mirror those being rolled out as part of the Shika Tano campaign, which provides high impact nutrition

counselling with the aim of improving the nutritional status of children under five and mothers. In addition to the nutritional counselling by CHVs, in November 2017, PSK also incorporated Short Message Service (SMS) and Beneficiary Learning Forums (BLF) which covered the key messages and targeted the households in the intervention arm. More details on the nutritional information being disseminated through all the platforms is given in Annex 1.

The NICHE programme covers Kitui and Machakos counties. These counties are part of Kenya's arid and semi-arid lands and are located approximately 160 km southeast of Nairobi. Kitui, the eighth-largest county in the country, covers an area of more than 30,000 $km^2$ including more than 6,000 $km^2$ occupied by Tsavo East National park. It was chosen for the implementation of NICHE given its historically-high levels of stunting and malnutrition. Machakos county covers an area of almost 6,000 $km^2$.

# LITERATURE REVIEW

The underlying premise of NICHE is that providing additional cash, combined with precise and usable health information, will facilitate positive behaviour change regarding children's health and nutrition. This will then lead to positive impact on early childhood growth and development. This two-pronged approach is substantiated by the literature.

## CASH TRANSFER EFFECTS ON CHILDHOOD NUTRITION

It is well established that stunting and other forms of children's undernutrition, like wasting and underweight conditions, can be reduced by improving women's nutrition during and after pregnancy, early and exclusive breastfeeding, and timely and appropriate complementary food (UNICEF, 2013). The role of cash in spurring the necessary behaviour change or otherwise affecting these outcomes is explored here.

More specifically, cash transfer programmes can increase consumption and food security, dietary diversity, and infant and young child feeding (de Groot et al., 2015; Miller et al., 2011; Hagen-Zanker et al., 2016; Holmes and Bhuvanendra, 2013 and FAO, 2015), but its direct impact on stunting, wasting and undernutrition remains mixed.

Some studies, from South America in particular, show that children in cash transfer-recipient households can grow marginally taller than those in control groups. Children in recipient households in the Mexican PROGRESA study, where recipient households were given bimonthly cash transfers worth 20 to 30 percent of household income, grew 0.96 centimetres taller (Gertler, 2004). Similarly, 12-month-old boys in a Colombian government programme, which distributes a monthly nutritional subsidy of about USD 15.38 to eligible mothers, grew 0.43 centimetres taller than their non-recipient peers (Attanasio et al., 2005). Buser et al. (2014) found that children from families that no longer received a USD 30 monthly cash transfer were 1.2 to 1.4 standard deviations less heavy than their recipient-peers, 0.8 to 1.0 standard deviations shorter, and had 0.8 to 0.9 standard deviations lower weight-for-height (WHZ).

However, an evaluation of the Bangladesh Transfer Modality Research Initiative by Ahmed et al (2016), which focused on four different interventions (cash, food, cash+food, and cash+behaviour change communication) in six study sites, found mixed results. Ahmed et al

(2016) found that cash (Taka 1,500, about USD 18.66) combined with behaviour change communication had a statistically significant effect on increasing height in only one study site. None of the other interventions in any of the other study sites had any statistically significant impacts on anthropometric outcomes. Studies of other cash transfers have also shown no impact on anthropometric outcomes, such as Merttens et al.'s (2013) evaluation of the Hunger Safety Net Programme in Kenya which distributes KES 3,500 bimonthly (about USD 35) (Merttens et al., 2013), and an evaluation of the Child Support Grant in South Africa, through which beneficiaries receive ZAR 280 (about USD 19.50) per month (DSD, SASSA and UNICEF, 2012).

The amount of cash given is also critical. In a Pakistan cluster RCT with three different cash intervention arms, the larger monthly cash transfer (USD 28 per month for 6 months compared with USD 14 per month) had the greatest effect on wasting in under 5-year-olds after six months. This difference, it should be noted, disappeared after one1 year (Fenn et al., 2017). In all cash interventions, stunting improved, even after only six months, thereby suggesting a rapid catch-up.

In the Malawi Social Cash Transfer Scheme, Miller et al. (2011) similarly showed that USD 14 per month—the average amount provided to beneficiaries—decreased stunting in the intervention arm. The sample size, however, was not sufficient to show significance as data were only available for 209 children. In contrast, the authors were able to demonstrate statistically significant effects on food security when data were available for more households.

Studies and evaluations of cash transfer programmes have raised several lessons learned and recommendations. A significant observation is that the size of the cash transfer must be large enough to make a difference to family income and therefore improve and diversify the diets of poor households (Ahmed et al., 2016; Devereux, 2016; Renzaho et al., 2017). Renzaho et al. (2017) suggest that the cash transfer should equate to at least 20 percent of household expenditure.

Another suggestion raised by several authors is that cash transfers alone are not enough, and transfers should be embedded within other IYCF initiatives (Renzaho et al., 2017). Such interventions could include nutritional counselling and beneficiary capacity building, including the involvement of existing community structures, to maximise sustainability as well as effectiveness (Ahmed et al., 2016). Given the limitations of the cash transfers on affecting nutritional outcomes in Kenya, Merttens et al. (2013) suggest that cash transfers should be implemented alongside complementary interventions, particularly supply-side activities.

## EDUCATION, COUNSELLING AND COORDINATED INTERVENTIONS

In Nepal, Renzaho et al. (2017) found a significant drop in the rate of stunting, underweight, and wasting among children aged two and older who were enrolled in a multi-faceted programme that included cash transfers of NRs 200 (about USD 2) and social protection programming, compared with their control counterparts. For children under the age of two however, the impact was far less, however, and the authors recommend increasing the cash amount to increase intervention impact on children less than two years old.

Indeed, Merttens et al. (2013) argues that the mixed results described above are unsurprising given the variety of exogenous factors that affect nutrition, including “knowledge”. Studies show that the impact of cash transfer interventions on nutritional indicators is much higher when recipients also get information about dietary diversity and a healthy diet (Ahmed et al., 2016; Devereux, 2016). In Bangladesh, for example, behaviour change communication combined with cash transfers valued at around USD 18.66 was shown to have a greater impact on food consumption than cash transfers alone. Over the course of a two-year study, stunting was reduced by 7.3 percent in this group (Ahmed et al., 2016).

A recent review has shown that educational strategies work best in food secure populations and that nutritional counselling can increase height-for-age (HAZ) z-scores by 0.25 points compared with control groups (Bhutta et al., 2008). Currently, a community-clustered randomized control trial (RCT) of different approaches to nutritional counselling is underway in Bangladesh. It is following 1,500 pregnant women from pregnancy through the infant’s first 24 months (Billah et al., 2017). This should provide additional insights into the comparative effect of different intervention types.

Knowledge, by itself, however, is usually insufficient to compensate for a household’s ability to purchase higher quality foods. In the Democratic Republic of Congo, for instance, Grellety et al. (2017) reported that among children with uncomplicated severe acute malnutrition (SAM) whose caretakers received a monthly cash transfer of USD 40, 80 percent regained their WHZ. However, among children in households that only received infant and young child feeding (IYCF) counselling, less than 40 percent had successful outcomes, with many deteriorating after discharge.

Additional important proximal factors of childhood stunting include appropriate sanitation and hygiene (Dewey and Mayers, 2011). Two recent RCTs in Bangladesh (Luby et al., 2018) and Kenya (Null et al., 2018), both published in *The Lancet Global Health*, reported no effect of WASH interventions on linear child growth. In India, however, Rah et al. (2015) demonstrate a robust inverse association between handwashing and prevalence of childhood stunting.

Additional studies, including Pickering et al. (2018), demonstrate a link between latrine construction and improved WASH practices and linear growth among young children, including for children under two years. Moreover, the effects were greatest among the youngest children in this sample.

Diverse literature therefore reinforces the underlying premise of NICHE, that providing additional cash, as well as precise, usable health information will facilitate positive behaviour change that will reduce malnutrition, stunting and wasting among children in its target communities.

# OBJECTIVES AND SCOPE OF THE NICHE PROGRAMME EVALUATION

Kimetrica's role was to evaluate the NICHE programme over a period of 16 months, from initial implementation in March 2017 until June 2018. This final report builds upon the work of Manji (2015), who initially proposed an evaluative design of NICHE. It presents the findings of the evaluation, and it integrates quantitative and qualitative data for detailed analysis. Included in this analysis is a discussion of practical challenges faced at implementation by both programme implementers and by households, lessons learned and recommendations for effective ways forward.

The objective of this study, as outlined in the Terms of Reference, is to assess causal linkages between the NICHE programme and expected outcomes such as improvements in growth, food consumption and positive health, nutrition and hygiene behaviours. In addition to effectiveness, requests were made to comply with other United Nations Evaluation Group (UNEG) evaluation criteria by also assessing aspects of the programme's operational efficiency and relevance of the interventions.

The evaluation was deemed important to UNICEF and GoK to recover evidence gaps demonstrating that cash transfer and nutrition counselling have the potential to improve nutrition practices. It would also serve to increase the body of knowledge on integrated programming of cash transfer and nutrition interventions in different contexts. The evidence is already proving useful in advocating to the policy makers in GoK at national and county levels, as well as multilateral, long-term donors on the impact of and need to invest in social protection and nutrition programmes including the national Social Protection Bill. The primary users of this report, therefore, include UNICEF, MLSP, MOH, and implementing partners supporting the scale up of NICHE in other counties.

The specific research questions are in Table 1.

**Table 1. Research questions**

| Criteria | Research Question |
|---|---|
| Effectiveness | Can additional cash transfers with nutritional counselling increase the anthropometric outcomes in children under 2 years?<br><br>Can additional cash transfers with nutritional counselling increase secondary outcomes (including children fed according to World Health Organization (WHO) guidelines)?<br><br>What are the causal pathways related to decision-making through which awareness and understanding of best practices (e.g. hand washing and breastfeeding) translate into improved nutritional uptake?<br><br>What are the possible confounders or externalities in the study area which may be influencing the results, including delays in receipt of cash? |
| Efficiency | How efficient was the cash transfer system in terms of promptness of payments and ease of access? |

| | |
|---|---|
| | How efficient was the use of CHVs in delivering nutritional counselling in terms of frequency and duration of visits, and ease of access to information? |
| Relevance | Was the amount of cash received sufficient to make any changes?<br><br>Was the nutritional counselling appropriate to their needs? |

# METHODOLOGY

## ETHICS STATEMENT

Ethical approval was obtained from the AMREF Health Africa's Ethics and Scientific Review Committee (Reference: AMREF-ERSC P294/2016). The ethical approval letters can be found in Annex 2. The trial was also registered with ClinicalTrials.gov (NCT03518593).

During the data collection process, written informed consent was obtained from every household before anyone was allowed to take part in each of the surveys. Consent was obtained from caregivers before a child's anthropometric measurements were taken and in cases were a household did not consent, the interview was not conducted. The questionnaire used was developed using universally approved indicators and ensured the use of respectable language taking into consideration the culture of the participants. The study also ensured that the rights of all the participants were respected. No cases of disrespect or misconduct of enumerators were reported to Kimetrica by the study participants. The consent form used for the study was approved by AMREF and can be found in Annex 3.

All data collected was stored in Kimetrica's server during the data collection period and was shared only with authorised personnel during the data cleaning and analysis phase.

During the period of the study, Kimetrica maintained its independence as an evaluator by ensuring that there was no favouritism towards any stakeholder or household and that all households enrolled in the study fully met study criteria set during the inception phase. Kimetrica did not participate in any dissemination of the cash transfers nor in the nutritional counselling.

## STAKEHOLDER INVOLVEMENT

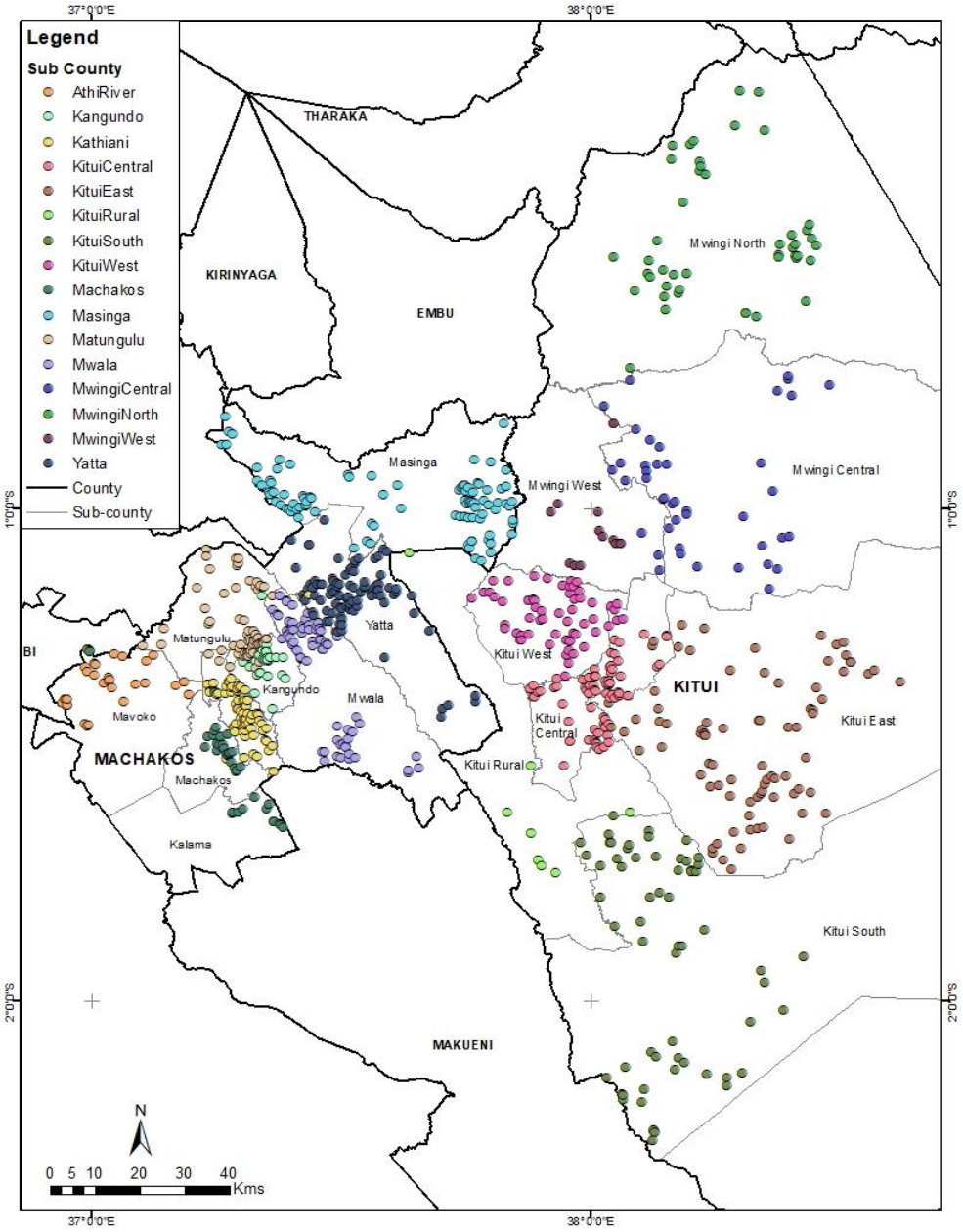
The NICHE study had the following stakeholders, UNICEF Kenya, Social Protection Secretariat, Ministry of Health, Children's departments of Kitui and Machakos, PSK and IMC. Their involvement included several meetings during the inception phase between UNICEF, PSK, IMC and Kimetrica. In addition, Kimetrica presented the methodology to the Ministry of Health and received feedback before the commencement of the study. Once the study began, UNICEF, PSK and Kimetrica held meetings after the completion of each survey so as to discuss the progress, to brainstorm and create action points to handle the challenges identified in implementation and for Kimetrica to report on preliminary findings especially those on the implementation of the interventions. The Kimetrica team also ensured to have meetings with the representatives in the Children's Departments in Kitui and Machakos before the commencement of the household surveys and all the stakeholders above held a joint meeting with the Social Protection Secretariat to provide progress briefs on the Study.

# STUDY DESIGN

## BACKGROUND

The primary research instrument utilized for this study is a panel household survey structured as a randomized control trial (RCT). Differences in primary anthropometric outcomes and secondary outcomes, such as best feeding practices, are assessed from a baseline and end line survey. Two midline surveys, conducted four months apart, were to be used to assess impact pathways through secondary outcomes and seasonal effects. This however changed to three midline surveys, as explained below, due to the additional October 2017 baseline and the extension of the study to June and not March as initially planned. Figure 1 maps the households visited during the end line survey in June 2018.

**Figure 1. Map of households visited during end line survey in Kitui and Machakos, June 2018**



The sample population was drawn from existing CT-OVC cash beneficiary households in Kitui that had a pregnant woman and/or child aged 0-24 months. This study defines a household as people that live together and eat from the same pot. Initially, children ages 13-24 months were to be excluded from the midline and end line surveys and were to only be included in the baseline survey for the purpose of providing pre-treatment data for children that would end the trial period in that older age group. However, they were not excluded, and their data was collected if and only if they were below 24 months during the midline or end line surveys.

The aggregated sample size for each of the two arms throughout the study was 1,306 children, which allows for a minimal detectable difference of 0.226 (stunting), 0.145 (underweight) and 0.157 (wasting) between the intervention and control group post-intervention. In other words, at a 95 percent confidence interval, the sample size obtained would require a minimum change between treatment and control of 0.226, 0.145 and 0.157, respectively, to ensure that the change is not the result of measurement error or chance.

Since only 1,592 households were identified during the listing exercise as eligible, all were visited at January 2017 baseline (e.g., no random sample inclusion).

Guyatt et al (2016) determined the RCT minimum sample size to detect a defined detectable difference given baseline variance in given variables based on Matthews (2006):

1. For an Individually-Randomized Control Trial with a Continuous Outcome Variable:

$$d = \sqrt{\frac{2\sigma^2}{N}} \cdot (Z_{\alpha/2} + Z_{(1-\beta)})$$

2. For an Individually-Randomized Trial with a Binary Outcome:

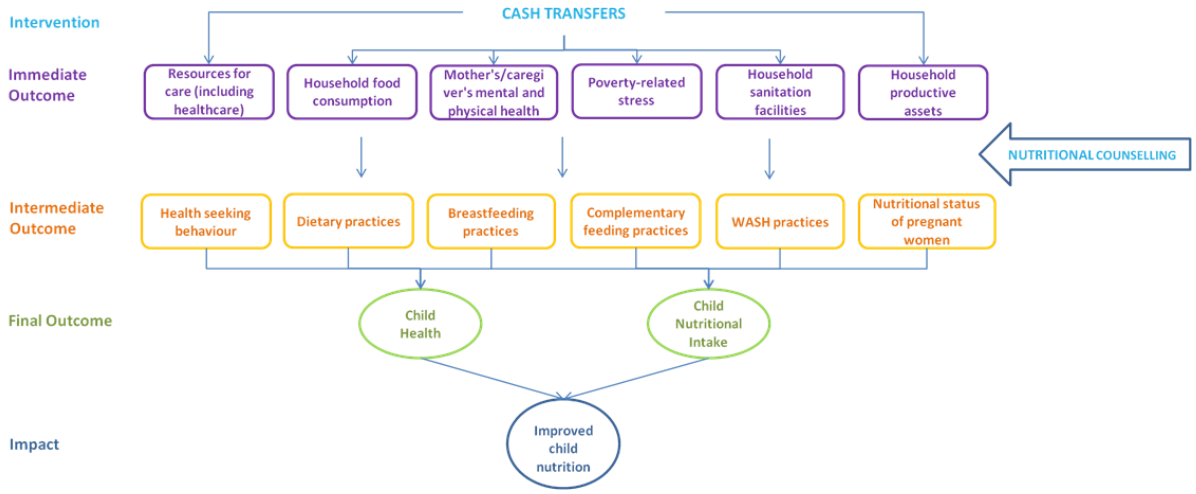
$$N = \frac{(Z_{\alpha/2} + Z_{\beta})^2 \cdot [p_T(1-p_T) + p_C(1-p_C)]}{d^2}$$

- ***d*:** the difference in means between the treatment and control groups that you want to be able to detect with a specific study design
- ***N***: sample size for one arm.
- $\boldsymbol{\sigma}^2$: the variance of the outcome variable. The variance may be different between the treatment ($\boldsymbol{\sigma}^2$T) and the control ($\boldsymbol{\sigma}^2$C) groups. However, we will assume that $\boldsymbol{\sigma}^2$C= $\boldsymbol{\sigma}^2$T= $\boldsymbol{\sigma}^2$
- $\boldsymbol{Z_{\alpha/2}}$: The standardized score needed to obtain a confidence level of 1 - α. The score describes the number of standard deviations away from the mean required to obtain (1-α) percent of the distribution. α/2 is required to reflect a two-tailed distribution. Statistical significance describes the percent chance you did not incorrectly reject the null hypothesis.
- $\boldsymbol{Z_{(1-\beta)}}$: the standardized score needed to obtain a power of $\beta$. Power measures the percent chance that you correctly reject the null hypothesis.
- $\boldsymbol{\rho}$: the Intra-Cluster Correlation (ICC) coefficient. This is the ratio of variance between clusters to variance within clusters.
- $\boldsymbol{\rho}_T$: the proportion of participants in the Treatment group with the outcome variable =1
- $\boldsymbol{\rho}_C$: the proportion of participants in the Control group with the outcome variable = 1

## THEORY OF CHANGE

In the inception report of the NICHE study, Guyatt et al (2016) formulated a theory of change based on the casual pathways by which cash transfers and nutritional counselling can affect the nutritional outcomes of a child (see Figure 2). The theory of change shows the intermediate and final outcomes due to nutritional counselling and an increase in the cash transfer. These will lead to improvements in the child's health and nutritional intake and ultimately improve the child's nutritional status.

**Figure 2. Theory of Change for Cash Transfers and/or Nutritional Counselling Interventions**




### TOC Assessment

A number of assumptions, risks and externalities are included in Guyatt et al.'s (2016) intervention impact pathway. The first assumption was that the cash transfers (intervention) will be used for the benefit of the young children and pregnant women, that they will not be allocated to other household members' needs at their expense, and that they will not be used for any harmful or unhealthy behaviours (such as the purchase of alcohol or illegal substances). Qualitative feedback suggests that this assumption largely held, though any leakage of this kind will negatively affect data quality and findings. At the same time, these may be classified as unintended consequences that may arise from such an intervention.

Secondly, the successful change in child nutrition also depended on the availability of quality healthcare services, adequate infrastructure and supplies of healthy and nutritious foods in the intervention area. Thus, if counselling combines with cash to spur enhanced intermediate outcomes, as observed and, crucially, is measured by indicators, final outcomes as presented in the TOC will still hinge on the presence and availability of infrastructure and resources that we know are spatially variable.

The risks include delays in the disbursement of the cash transfers or the ineffective use of resources, which may postpone or, at worst, prevent improvements in child nutrition. An external risk is potential shocks, such as increased food prices, which may affect the impact of the programme by decreasing access to nutritious foods. Unequal distribution of benefits within beneficiary households (intrahousehold resource allocation) also represents a possible risk. Other risks include cultural and religious beliefs whereby the household does not believe in seeking medical treatment, for example, or households relying on the cash transfer as a

main source of household income as opposed to a supplemental one, therefore using it for costs other than nutritious foods for children such as school fees and rent. These risks, would, like some of the assumptions noted above, be unintended outcomes that are not captured in the original TOC. These and other risk indicators could be included in a more complex TOC moving forward.

Additionally, when critically assessing the original TOC, the strengths include the use of precise results indicators. These allow for less ambiguous insights into the intervention's impact pathways as well as limitations.

## TREATMENT ARM DESIGN AND INITIAL CHALLENGES

The RCT was initially designed with two treatment arms and a control group. The treatment arms would be additional cash only and additional cash with nutritional counselling, and the control group would continue the CT-OVC cash transfer as usual. For the treatment arms, in addition to the CT-OVC of 2,000 Ksh (about USD 20) per month, paid bi-monthly, the additional cash amounted to 500 Ksh (about USD 5) every month per child or pregnant woman up to a maximum of 1,000 Ksh (about USD 10) per household per month.

Nutritional counselling would occur through household visits by CHVs. Their topics would cover: exclusive breastfeeding for children under six months, using ORS and zinc to manage diarrhoea, intake of vitamin A supplements for children, complementary feeding and dietary diversity, intake of iron and folic acid supplementation for pregnant women and appropriate or enhanced WASH practices.

On-the-ground challenges forced changes to the initial design. Firstly, there was an insufficient number of eligible households. The initial household listing by International Medical Corps (IMC) included 1,186 potentially eligible households in Kitui. During the January 2017 baseline, however, Kimetrica determined that many of these were unable to meet the inclusion criteria, and the required sample of 1,500 was therefore not met. It was agreed with UNICEF that, in order to supplement the sample size, additional households would be recruited in the neighbouring sub-counties of Mwala, Masinga and Yatta in Machakos. This produced 406 potentially eligible households. Households confirmed to be eligible after the baseline from both counties totalled to 1,199. This still did not fulfil the required minimum sample size in each arm, hence the study was changed to one treatment arm—additional cash and nutritional counselling—rather than proposed two-arm intervention.

Following the January baseline, the 1,199 households were randomly allocated into two arms, Treatment and Control. Randomized groups were created by iterating through random assignations of subjects to different arms of the study, checking to see at each iteration if the most important baseline covariates were well-balanced (e.g., roughly the same in each arm). Although Kimetrica had planned to collect information for all children up to the age of 24 months along the follow-up studies, it randomised on one child or pregnant woman in a household, controlling for total number of siblings in the household below and above 24 months of age in the analysis (Fenn et al., 2015). The interventions (cash and nutritional counselling) were timed to be rolled out in March 2017.

The second challenge affecting the RCT sampling design occurred during the first midline survey in July 2017 where there was a significant loss to follow-up; this meant that the sample

size for the control and treatment arms was falling below that estimated as being necessary during the inception phase. Although there were a few child deaths and miscarriages, most of the loss to follow-up occurred through a permanent change in the status of the target pregnant woman or the child (e.g., a permanent move out of the household or total relocation, etc.). Furthermore, the evaluation team detected a significant number of households that had falsified information regarding the target pregnant woman or child. These children or pregnant women were not permanent members of the households (e.g., were visiting), as initially reported.

The solution proposed by the NICHE implementing partners to address the challenge of loss to follow-up was to add in another panel from the rest of Machakos county: Mwala, Machakos, Kathiani, Matungulu, Athi-river and Kangundo sub-counties. This panel was enrolled in October 2017 following another listing conducted by UNICEF Kenya and the Machakos Children's County Office. Immediately following baseline data collection, these households were randomised like the original cohort (comprising of the households from Kitui and the first three sub-counties in Machakos), and the intervention rolled out immediately with the first cash payment due in November or December 2017.

Also, during the July 2017 midline survey, it became evident that there were significant delays in the rollout of the interventions. Only one-third of treatment households had received a visit from a CHV and an additional cash transfer. The partners began to increase coverage, however, the NICHE team also decided to extend the evaluation to allow more time for the intervention to produce intended effects, even though there would be some loss to the cohort from aging-out. An additional midline was added for March 2018, and the end line was moved to June 2018. This increased the midlines from two to three.

The sample was derived from 1,205 of 1,592 households visited in the January 2017 baseline and 422 of 618 households in the October baseline. These (1,205 and 422) were then filtered based on eligibility and a sample of 1,199 households (January 2017 baseline) and 361 households (October 2017 baseline) were enrolled into the study (see Figure 11 and Figure 12 in Annex 6). From these enrolled households, analysis was carried out on a final sample of 763 and 360 eligible and currently enrolled households, for the January and October baselines respectively.

## RCT ANALYSIS PARAMETERS

Apart from losses to follow-up, which are shown in the Consolidated Standards of Reporting Trials (CONSORT) diagram (see Figure 11 in Annex 6), the following exclusions were made in some of the models:

- **Household non-receipt of a cash transfer during study period.**
  Nineteen households (13 control; 6 intervention) were excluded because they did not receive any cash transfer, either, ever (n=6) or since 2016 (n=13). In addition, five households in the intervention arm never received the additional cash transfer. These households were also dropped.

- **Newly-enrolled households in Machakos.** With the addition of the second, October 2017, baseline, Kimetrica enrolled 361 new participants (see Figure 12 in Annex 6).

These participants were from the remaining Machakos sub-counties not included in the first January 2017 baseline. Eligibility remained the same, e.g., from a household that is already a beneficiary of the CT-OVC programme with a child under 24 months and/or a pregnant woman.

# QUANTITATIVE DATA COLLECTION

During the baselines, enumerators confirmed that all households surveyed were already part of the existing CT-OVC cash transfer scheme, as well as the presence of a child between 0 and 24 months and/or a pregnant woman. Survey respondents were the main caregivers.

## RCT HOUSEHOLD QUESTIONNAIRE

The questionnaire was designed to capture crucial descriptive information on households, participating pregnant women, and children and their caregivers (see Inception Report, Guyatt et al., 2016, for the household questionnaire). Children were physically assessed though anthropometric indices collected on-site. Height was measured with a short board, an adjustable measuring board calibrated in centimetres. Children were measured lying down, recumbent length, on the board or while standing on the board. Weight was assessed using a calibrated electronic weighing scale which allows a child's weight to be measured while it is being held by an adult.

Participating pregnant women were interviewed, and a mid-upper arm circumference (MUAC) examination was performed on all participating pregnant women, children and their main caregivers. In addition to direct questioning, interviewers also directly observed and inquired about household sanitation practices.

The original baseline questionnaire (January 2017) captured the following information:

- **Section 1: Identifier section -** General characteristics of the household including information on the head of household, location, religion, and if the household was a recipient of other social protection initiatives;
- **Section 2: Household roster -** Household roster listing all members, their position in the household, age, sex, educational, disability and chronic disease status;
- **Section 3: Child and Caregiver -** Target child characteristics including age, sex, details of the father and his support to the child, anthropometrics, general health, vaccination coverage and use of routine health services, feeding practices (breastfeeding and complementary foods), food consumption (dietary diversity and food consumption score (FCS));
    - Main caregiver of target child characteristics including: age, sex, MUAC, levels of stress, food consumption (dietary diversity and FCS), handwashing practices, health facility access, and health and nutrition information access;
- **Section 4: Pregnant women data -** Pregnant women characteristics including age, pregnancy history, antenatal care (ANC) visits and medications, MUAC, levels of stress, food consumption (dietary diversity and FCS), handwashing practices, health facility access, and health and nutrition information access;
- **Section 5: Cash transfer -** CT-OVC cash transfers: the amount and timing, recipients and how it is spent;

- **Section 6: Income and livelihoods -** Livelihoods and income: main household livelihood, total income and sources of income;
- **Section 7: Socio-economic data and wealth indicators -** Socio-economic status and wealth: asset ownership, water source, sanitation and handwashing facilities, handwashing facilities;
- **Section 8: Food accessibility -** Food access and prices: market access, spending on food, own food production; and
- **Section 9: Coping strategies -** Household coping strategies: coping strategy index (CSI)

For the July 2017 survey, Kimetrica added questions to capture more details on cash, counselling and any changes in the dynamics of the household:

- **Section 10: Nutritional counselling -** Number of visits from CHVs in the last month, six months and since the baseline, and the topics covered during the visits;
- **Section 11: Additional Information -** New births, new pregnancies and any major changes in financial situation;

Following findings from the July 2017 midline, questions were added to specific sections for the November survey in order to capture the following:

- **Sections 3, 4:** Extent of the child's and/or pregnant woman's travel and absences from the household of the child and/or pregnant woman, including travel history and expected future travel.
- **Section 5:** All cash transfers received from the beginning of January 2017, the amounts of the usual CT-OVC cash transfer and the amount of additional cash transfer received each time.
- **Section 10:** All nutritional counselling received throughout the year.

In the November 2017 midline, UNICEF requested information on the production, consumption and sale of green grams. This was a new initiative in the county, which may supplement both household diets and income.

Finally, the June 2018 endline survey probed for the following additional information:

- **Section 1**: Reasons behind initial CT-OVC programme enrolment (for example, whether the household was registered because it had orphans or other vulnerable children).
- **Section 7**: WASH practises, for example, the presence of soap in the household, number of sanitation facilities and self-reported hand washing practices.
- **Section 11**: Information from the Mother and Child Health booklet[1] to capture the number of prenatal visits with a health professional and routine medical visits for the child.

[1] The Mother and Child Health booklet is a free document that is issued in hospitals to expectant mothers. It captures health information on the mother during the pregnancy period and health information on the child from birth such as date of birth, birth weight, vaccinations across time and growth monitoring data.

- **Section 12**: a new section was added to capture knowledge of the key nutritional messages, including the experience and challenges faced by households with the interventions.

By the June 2018 endline, the survey (including anthropometric component) took approximately 120 minutes to complete by trained, experienced enumerators. The total number of respondents enrolled varied between baselines, midlines and endline, but ranged between a minimum of 591 and a maximum of 1,199. Annex 4 provides more information on the additional sections and questions that were added to the household questionnaire for each of the surveys.

## RCT KEY VARIABLES

The primary outcome measurements of this study are: the rate of stunting (HAZ), wasting (WHZ) and underweight (weight-for-age, or WAZ). These were compared with global averages as defined by the WHO in its Multicentre Growth Reference Study (2006), determined by relative z-scores, or standard deviations from the mean score.

More precisely, this evaluation was specifically designed to detect differences in z-scores over time between treatment and control groups. As noted above, differences in z-scores are typically small, and thus difficult to detect, and therefore require strict study parameters and sufficient sample sizes (Bhutta et al., 2008 and 2013 and Fenn et al., 2015).

Secondary or intermediate outcomes, some of which are also covariates to primary outcomes and each other, include the following:

- Infant and Young Child Feeding (IYCF) best practices:
  - Breastfeeding (child put to breast within 1 hour of birth, fed exclusively breast milk if 0-5 months)
  - complementary foods (fed solid, semi-solid or soft foods); and
  - minimum meal frequency according to WHO (2008).
- Pregnant woman and mother feeding practices: ensuring consumption of a balanced diet and intake of vitamins and supplements.
- WASH best practices: handwashing practices of caregiver and use of improved water sources[2] and sanitation facilities.
- Use of routine health services: times a child visited a health facility for a routine check-up in past six months (since birth, if less than six-months-old) and for routine vaccinations.
- General health of the child: Times visited a health facility for an illness in past six months (since birth, if less than six-months-old); Reported symptoms of diarrhoea, respiratory infection, malaria (confirmed in health facility) in past two weeks/six months
- Stress levels: household security stress and caregiver stress/happiness levels
- Food intake**:** minimum acceptable diet; dietary diversity and FCS of child, pregnant woman and caregiver.

[2] Improved drinking water sources are those that have the potential to deliver safe water by nature of their design and construction, and are located on premises and readily available (WHO, 2018).

- Household coping strategies: number of times members have reverted to activities they would otherwise not engage in due to lack of food; changes in behaviour due to new information.

## INTENSITY OF THE INTERVENTIONS

Given that the intensity of the interventions (whether cash or counselling) were not homogenous throughout households in the treatment arm, additional questions were added to the household survey to qualify these differences across households. These are described separately for the nutritional counselling and the additional cash transfer.

### Nutritional counselling

To capture the intensity of nutritional counselling, data on the frequency of CHV visits and the duration of the visits was recorded.

- **Frequency of CHV visits**
  - Total number of visits in the last month (Q1003)
  - Total number of visits in the last 6 months (Q1004)
  - Number of visits since the baseline (Q1001c)
  - How often the CHV visits the household (weekly, bi-weekly, monthly, every two months) (Q1002b)
- **Duration of visits**
  - Amount of time the CHV spent in the household during the last visit (1005)
  - Average amount of time spent in the household per visit (1001d).

The efficacy of counselling was determined by assessing the topics covered during the CHV visits and knowledge acquired by the household, both quantitatively and qualitatively. Specifically, six topics were surveyed (Q1009-1014) including handwashing, exclusive breastfeeding, Vitamin A, balanced diet, ORS for diarrhoea and IFAS for pregnant women.

Knowledge of best practices is captured by section 12**.** A score of seven out of nine on the nutritional knowledge quiz, whether among treatment or control households, was used to determine general knowledge (see Annex 1 for section 12).

### Cash transfers

Section 5 of the endline survey (Q502) has monthly information since January 2017 on CT-OVC cash received and additional cash, including the date and amount. Additional cash, received by endline, divided by baseline cash received (by CT-OVC), constituted the cash "intensity" component of the analysis.

## RCT MODELLING/STATISTICAL APPROACH

Kimetrica examined data from the baselines, three midlines and endline surveys to create multiple Difference-in-Differences (DiD) models. DiD models are utilized in RCTs to isolate the effects of the intervention on outcomes and variables of interest. The NICHE RCT presented some initial challenges, as it more so resembles an open cohort epidemiological study rather than a strict RCT. Participants were either dropping out and aging out, or new participants were enrolling over the course of the study.

To limit the effects of the extensive number of dropouts on sample sizes (See Figure 11 and Figure 12 in Annex 6), tests were run on all observations, across each baseline, the three midlines, and endline, rather than on just those few who transacted or spanned the entire study. This increased (or preserved more accurately) the total number of testable observations for robustness.

Furthermore, Kimetrica's Data Lab created and utilized continuous variables that reflect the intensity of cash supplementation (as a percent increase in cash received), intensity of nutritional counselling (as number of visits) and an interaction term (cashxcounsel) that measures the combined effect of NICHE counselling and cash on a range of outcomes, including stunting, wasting, and underweight, as well as the intermediate outcomes.

Models were trained on all observations, and then tested on a sub-sample of 25 percent in order to minimise bias. Initial results are reported in the sections that follow.

This approach is an appropriate and preferable tool for an analysis of the NICHE data set, substantiated by literature and analyses of similar data sets (Puhani, 2008 and Branas et al., 2011).

## QUALITATIVE DATA COLLECTION

Qualitative data collection is essential to the NICHE evaluation and is comprised of focus group discussions (FGDs) and in-depth interviews (IDIs) with programme beneficiaries, and a knowledge quiz carried out at endline with the surveyed households. Qualitative findings provide contextual insights into the programme's implementation and reveal impediments to NICHE uptake and effectiveness. They also directly assist with the interpretation of quantitative findings by providing a more nuanced examination of causal drivers. Given the sometimes-ambiguous results stemming from the quantitative analysis, qualitative feedback was utilized to understand the potential and most plausible direction of causation between ambiguous correlations, and thus plays a crucial role in the analysis.

### FGDS WITH *SHIKA TANO* CFA BENEFICIARIES

FGDs were held with beneficiaries of the *Shika Tano* campaign from the WFP Cash for Assets programme (CFA) in November 2017. FGDs with these beneficiaries (referred to as CFA beneficiaries here forward) were conducted as a corollary to the NICHE evaluation as participants live in the same area and present an interesting parallel with the NICHE programme whereby nutritional counselling is combined with cash transfers (although in this case, the counselling and cash transfers are not directly linked). These FGDs are thus specifically utilized to understand the experience with cash transfers and counselling among similar populations as NICHE participants, and to decipher any distinctions if relevant.

*Shika Tano*, which means "High Five" in Kiswahili, is a campaign implemented in Kwale, Kilifi and Kitui since August 2016, and was subsequently extended to Machakos as part of NICHE. It focused community attention on five key nutrition practices for children and mothers: breastfeeding, vitamin A supplementation, iron and folic acid supplementation for pregnant/lactating women, food diversity for children, and treatment of diarrhoea with an oral rehydration solution and zinc. Its awareness-raising methods included one-on-one household

visits by community health volunteers, small group sessions to mobilise and sensitize women, community events, radio advertisements and campaigns, and social behaviour change communication materials.

The FGDs with CFA beneficiaries were held with representatives from CFA beneficiary households with a child under the age of two or a pregnant/lactating woman in the past year, who were living in two wards where *Shika Tano* was implemented: Kanziko in Kitui South and Kyuso in Mwingi North. Six FGDs were planned for each ward, for a total of 12 FGDs, with three in locations close to the market centre and three at some distance away. In each location, the three FGDs were to cover two age groups of women (18-35 years and 36 years and above) and one group of male heads of households of any age. In total, 13 FGDs were conducted with 93 participants.

FGDs explored whether *Shika Tano* approaches were relevant and appropriate to the local context and targeted households, the campaign's effectiveness in changing knowledge, attitudes and behaviours, and the constraints preventing the programme from being effective. Findings revealed that Shika Tano was indeed effective in increasing community awareness of the importance of nutrition and beneficial nutrition practices. However, communities nonetheless faced challenges in putting this nutritional knowledge into practice due to insufficient resources. Detailed findings from these FGDs are presented in a separate report (Guyatt et al., 2017) and these findings are used to inform conclusions and recommendations of this final report.

### ENDLINE FGDS WITH NICHE BENEFICIARIES

FGDs with NICHE beneficiaries were left to the end of the survey so as not to influence nutritional knowledge or behaviour during the RCT. The aim was to explore the relevance and efficiency of the programme, and possible constraints on its effectiveness, efficiency and sustainability, and recommend approaches to mitigate these. The purpose of the FGDs was also to gather recommendations for improvement for the next phase of the NICHE programme. The Endline FGD tool is provided in Annex 7.

A total of eight FGDs were planned to cover two target groups, pregnant women and caregivers at the time of the NICHE surveys, in four geographical locations (Kitui West, Kitui Central, Matungulu and Kangundo, and Kathiani). FGDs were to be held with pregnant women and caregivers separately. The locations were proposed based on the availability of pregnant women in these areas and considering that Mwingi North and Kitui South had already been covered in the FGDs with CFA beneficiaries. The participants were selected from two survey cohorts, the January baseline and the October baseline. This was intended to capture the different experiences of beneficiaries, given that the January cohort experienced delays in receiving the intervention.

Only seven of the eight planned FGDs were successfully completed, and five of these were held with a mixed group of women (both caregivers and women who were pregnant). This was a result of poor attendance in one of the two FGDs in Kathiani, where only two respondents arrived on time, and the fact that many participants did not arrive on time for their scheduled FGD, despite the team distributing invitation letters alerting participants of the dates and times of the FGDs and conducting reminder phone calls to participants the day before. However,

holding FGDs with mixed groups is unlikely to have skewed results, as few differences were noted between the responses provided by caregivers and women who were pregnant during the survey. A total of 52 participants attended the NICHE FGDs. Annex 10 presents a full list of participants, and a summary of the discussion in each FGD.

### ENDLINE IDIS WITH NICHE BENEFICIARIES

While in the field, the evaluation team also decided to carry out IDIs with NICHE beneficiaries who were originally mobilised to participate in the FGDs, to capture additional beneficiary feedback. Beneficiaries that arrived at a different time from when their FGD was scheduled, and thus either did not participate at all in an FGD, or only joined for a small part of it, were invited to participate in these IDIs. IDI respondents also included the two respondents who arrived for the FGD with pregnant women in Kathiani, which was not conducted. Summaries of these IDIs are presented as case studies in Annex 10.

### QUALITATIVE QUIZ

The endline survey included Section 12, or an additional "knowledge quiz," which was intentionally designed to determine the extent to which CHV visits resonated with households, the degree to which lessons were implemented, and to assess the overall quality and relevance of visits. These results were assessed alongside the qualitative results for analysis, as well.

### INTERVENTION MONITORING SYSTEM

- Kimetrica conducted all the baseline, midline, and endline evaluations. This provided information on the progress of the intervention, informing action on areas of improvement e.g. coordination, cash transfer system, accuracy of data on households, household visits etc. This was done every 3-4 months.
- MOH and PSK developed and implemented a household tracking tool. This was an ODK based form that was filled online. It tracked households including what they learnt, CHV visits, cash payments etc. Each household had to be visited at least once in two months. Details of the tool are presented in Annex 1.
- Social Behaviour Change Communication Tracking Tool: This was a form filled by the CHVs on monthly basis. It captured the households the CHV visited, the topics he/she covered, upcoming issues or challenges in the community and key recommendation for action.
- Periodic supportive supervision: this was undertaken by DCS and MOH teams jointly, with key areas of focus agreed upon before a mission. The missions were either random or specifically targeted to certain households based on CHV reports and reports from the complaints and grievances platform. The outcome of joint supervisions were reported back in the coordination forum.

## CHALLENGES AND LIMITATIONS

Some challenges are mentioned above, as they affected changes in the study design and statistical approach. These and other study challenges are addressed in more detail here, for transparency and learning.

- **Incomplete compliance:** There was not a consistent receipt of CT-OVC cash (regular cash transfer and additional cash) by all households in the intervention arm, though the process had improved considerably by the end of the evaluation. Also, two intervention arm households, as of the endline survey, reported never having received nutritional counselling.
- **Falsifications:** This occurred in cases where the household identified children and/or pregnant women who were actually visiting during the listing exercises and/or baseline surveys, or who disguised the fact that children present lived with neighbours.
- **Permanent relocations:** This applied in cases where mother and child relocated due to marriage, work, school or changes in cooking arrangements. This then led to a decrease in the household survey sample size.
- **Frequent absences/travel:** During the surveys, some mothers and children were absent from home. The main reasons were travel to visit the father of the child or relatives or seek medical attention. These households were re-visited a maximum of three times. If mother and child had not yet returned while the Kimetrica team was in the field, these households were skipped for that specific survey round only and visited in the next round.
- **CT-OVC database:** The database used to select beneficiaries was out-of-date. This limited the cross-checking of data and confirmation of information, such as which children were beneficiaries. Some data provided by households were inconsistent across surveys and therefore unreliable.
- **Widely-dispersed households:** Kitui is large, and during the November 2017 and March 2018 surveys, which took place during the rainy season, some households were difficult to reach. Nevertheless, most households were visited.
- **Accessing additional cash**: Some beneficiary households were not aware that they should swipe their cards twice to access the additional cash.

Finally, possible field-level complicating factors, uncontrolled for in this RCT, include the following:

- **Other schemes in the area**: The Health Insurance Subsidy Programme provides beneficiary households of CT-OVC with comprehensive health insurance coverage for both inpatient and outpatient services, with the aim of increasing access to better healthcare services.
- **Religion**: Households that belong to the Kavonyokia religion, whose followers do not use any health facilities, medication or vaccines, would have provided evidence on negative externalities. However, the household survey sample size was too small to determine this since 99 percent of the study sample self-reported as Christian.

# RESULTS

A summary of key findings:

- Initial results are mostly non-significant, but positive, particularly among secondary outcomes.
- Global models generally fit poorly and are not predictive. However, a deeper analysis suggests that treatment households are far more likely to practice enhanced hygienic, dietary and infant care practices than comparison households.
- Data reinforce qualitative findings, which demonstrate very positive results from CHV visits and positive behaviour changes.

The quantitative analysis resulting from all the surveys over a 16-month period did not yield statistically significant findings (we are unable to ascribe effects to treatment alone, with certainty), with some exceptions, but more fine-grained interpretations of the data are encouraging. It is unsurprising, given initial delays in programme implementation and coverage, and complications of the data, that more DiD models were not statistically significant nor more predictive (well-fitted) overall. These results should not be considered a set-back.

In contrast, the incremental changes revealed by logistic regressions of secondary results—like exclusive breastfeeding, minimum acceptable diet and handwashing practices, in particular—are very positive. In these cases, the introduction of NICHE cash and counselling, even at a minimum level, resulted in uniformly greater uptake/improvement compared with the comparison group, and sometimes considerably.

Additionally, qualitative investigations reinforce these and other findings. Respondents widely cited the value and relevance of CHV visits and acknowledged household behaviour change regarding improved hygiene and diet. Qualitative analysis adds further detail to apparent correlations and provides insights into the factors complicating enhanced uptake, or what might limit NICHE's impact to date, like difficulty accessing cash, for example.

Unexpected effects of the interventions were primarily positive, with additional improvements demonstrated on hygiene practices such as hand washing. This could be linked to the overall package of messaging from CHVs and previous trainings in CLTS, which emphasized upon open defecation free villages and improved hygiene practices. On the negative end, there are also few cases of conflict in the households due to limited disclosure of cash received to spouses.

Overall, the combination of initial qualitative and quantitative findings, when taken together, indicate positive early outcomes stemming directly from NICHE.

## SUMMARY STATISTICS

The study participants were selected from two cohorts, those baselined in January 2017 and those baselined in October 2017. For ease of reporting, and where we may assume that characteristics are relatively static, simple descriptive statistics, (household and caregiver characteristics, livelihoods and incomes, and WASH practices) are reported below based on endline numbers only and as a combination of the two cohort.

A detailed breakdown of the summary statistics disaggregated by each of the six surveys and by arm have been presented in Annex 8. Tables there mostly cover children 0-2 years old, and pregnant women, highlighting that sampling between genders and arms were appropriately balanced for the purpose of further statistical analysis. The Endline numbers are also reported there and disaggregated by cohort.

## HOUSEHOLD STRUCTURE

- More than 60 percent of heads of household were female (68 percent).
- Household sizes were large with a mean of 7, ranging between 3 and 18 members.
- Fifteen percent of households had a member who is disabled.
- Twenty-five percent of households had a member who is suffering from a chronic disease.

## CAREGIVER CHARACTERISTICS

- Eighty-three percent of caregivers were the child's mother; 14 percent were grandparents.
- Twenty-four percent of caregivers completed secondary school or a tertiary level of education, such as a college or university; 76 percent, primary school or no education at all.
- One percent of caregivers were under 18 years of age, 73 percent were 18 to 34, and 26 percent, 35 years and above. The mean age was 31-years-old.
- Two percent of caregivers had constant employment, and income ranged from 400 Ksh to 10,000 Ksh (about USD 4 to 100).

## LIVELIHOOD, INCOME AND ASSETS

- The main livelihood activity was farming (75 percent) followed by unskilled labour (14 percent). The main source of income was unskilled labour (47 percent) followed by sale of crops (15 percent).
- Reliance on other support such as remittances, cash gifts or government support was a main source of income for 4 percent of the households, with 15 percent receiving financial support from family and friends.
- Useful wealth indicators were cow and radio ownership at 50 and 48 percent, respectively. Thirty-eight percent of households reported having electricity, with most of these households being supplied by remote solar energy (65 percent). Other indicators were TV ownership (14 percent); phone ownership (92 percent). Most households (97 percent) owned the home in which they live and the land they farm.

## WATER AND SANITATION

- Forty percent of all households had a handwashing station. Those in the intervention arm had considerably more, e.g., first cohort: intervention (60 percent), control (13 percent); second cohort: intervention (76 percent), control (15 percent).
- Thirty-six percent of households used an improved water source for drinking. Thirty-four percent treated their drinking water. The average time to travel to, collect water and return home was 47 minutes.

- Eighty-eight percent of households owned a latrine; only 36 percent had access to an improved latrine.

## UNRELIABLE VARIABLES

- Frequency of breastfeeding was routinely misunderstood by survey respondents; reported values were exceptionally high.
- Reported time and distance to health facilities or water points were inconsistent; many extreme outliers were observed.

Some outcome variables are very high or very small in frequency, which makes discerning differences difficult, and thus are either not discussed nor analysed as a covariate. For religion, for example, over 99 percent of households self-reported as Christian.

**Table 2. Percentage of anthropometric statistics of children 0-24 months over the study period for the January cohort**

| Survey | Arm | Stunting | Wasting | Underweight |
|---|---|---|---|---|
| January Baseline (2017) | Control (n=485) | 20 | 6 | 9 |
| | Treatment (n=466) | 18 | 6 | 9 |
| July Midline (2017) | Control (n=441) | 26 | 7 | 11 |
| | Treatment (n=406) | 20 | 7 | 7 |
| November Midline (2017) | Control (n=294) | 27 | 5 | 14 |
| | Treatment (n=287) | 26 | 4 | 10 |
| March Midline (2018) | Control (n=217) | 29 | 6 | 14 |
| | Treatment (n=229) | 26 | 4 | 14 |
| June Endline (2018) | Control (n=183) | 28 | 3 | 13 |
| | Treatment (n=144) | 40 | 2 | 15 |

**Table 3. Percentage of anthropometric statistics of children 0-24 months over the study for the October cohort**

| Survey | Arm | Stunting | Wasting | Underweight |
|---|---|---|---|---|
| October Baseline (2017) | Control (n=161) | 13 | 2 | 7 |
| | Treatment (n=164) | 13 | 3 | 6 |
| March Midline (2018) | Control (n=127) | 17 | 1 | 6 |
| | Treatment (n=123) | 14 | 2 | 8 |
| | Control (n=144) | 18 | 1 | 5 |

| | | | | |
|---|---|---|---|---|
| June Endline (2018) | Treatment (n=149) | 17 | 1 | 5 |

Detailed data on breastfeeding, anthropometrics and stress are reported in the following section as part of the statistical analysis, in order to track changes in their respective prevalence and the effect of NICHE on such outcomes.

# STATISTICAL ANALYSIS OF NICHE EFFECTIVENESS AND IMPACT

This section summarizes the statistical analysis and results, while Annex 9 condenses the statistical reporting into tables for reference. As under the methodology, the open/rolling cohort nature of the study presented some initial challenges for statistical analysis. This was overcome, through various means, as discussed in the Methodology section.

## ANTHROPOMETRIC Z-SCORES

**DiD results for stunting, underweight and wasting comparing control and treatment households were positive, but very limited.** The coefficients for each WAZ and WHZ were positive, though minimally, indicating that outcomes improved with the intervention compared with a scenario in which NICHE was absent. However, none of the three results were statistically significant (p-values greater than .05) and the fit of the model for all three was weak (low r-squared values). This is not altogether surprising, however, given the relatively short duration of the intervention and complications reported by FGD participants in accessing cash. Moreover, detecting movement along z-scores is notoriously tricky, subject to measurement error and, even with accuracy assumed, influenced by factors difficult to control (World Bank 2013).

**Table 4. Anthropometric z-scores by treatment and control group, household size and income**

| | HAZ (stunting) | WAZ (underweight) | WHZ (wasting) |
|---|---|---|---|
| **DiD (cashxcounsel)** | -0.0196 | 0.0005 | 0.0104 |
| **mse** | 1.3624 | 1.1964 | 1.3117 |
| **$r^2$** | 0.1959 | 0.1326 | 0.0342 |
| **p-val (cashxcounsel)** | 0.290 | 0.976 | 0.976 |
| **p-val (HH_size)** | 0.465 | 0.012 | 0.011 |
| **p-val (income)** | 0.020 | 0.089 | 0.836 |

***Variables included in model:*** 'time', 'counsel_visits','intensity_percent','cashxcounsel', 'age(months)', 'HH_size', 'income_indicator', 'gender'

Notably, within these models, statistically-significant results were recorded for household size (in WAZ and WHZ models with p-values of .012 and .011, respectively) with small but negative coefficients, indicating that households size increases likelihood of underweight and wasting, as might be expected. Similarly, income had a positive effect on each in the HAZ model (p-

values of .020 in each). The consistency in which signs (positive versus negative) change as one would intuit, does suggest that the positive coefficients across WAZ and WHZ results are accurate, or reflect some positive effect, if again minimal (the stunting coefficient was negative, but barely discernible from zero, and also not statistically significant). Thus, while the combined effects of additional cash and counselling, together, were not easily detected, the underlying inverse relationship between income and stunting was reinforced, substantiating the need for additional cash assistance, broadly speaking.

Qualitative feedback from beneficiaries nevertheless highlight the positive impact of the programme, even though most results from the quantitative household survey were not statistically significant. Mothers noted seeing positive impacts on the weight of their children after following the advice given by CHVs. For example, one 38-year-old caregiver from Mulango, Kitui central, said, “The information was useful to me in that previously we used to just feed our babies but there was no addition of weight, but nowadays due to the well-balanced diet and the advice we have, the babies are in good health and they keep on gaining weight.”

Indeed, beneficiaries cited the health benefits they had seen as a result of NICHE as a reason that the programme should be extended to bring positive impacts to more people. As one 49-year-old caregiver from Kathiani said, “The advice on the balanced diet and bringing up of the child has helped us to prevent stunted growth and if others are educated on such, they will be able to bring up their children and also to take care of themselves.”

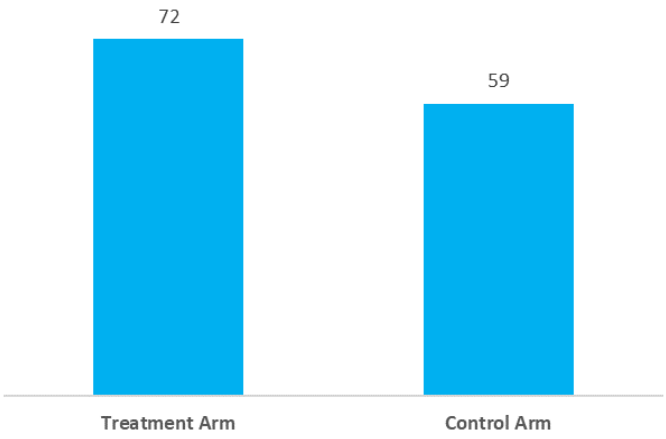
These positive qualitative findings, despite the seemingly inconsequential stunting, wasting and underweight scores may not be so incongruous, but rather be reflecting what families experienced with the intermediate outcomes.

# STATISTICAL ANALYSIS OF INTERMEDIATE OUTCOMES

## EXCLUSIVE BREASTFEEDING IN CHILDREN LESS THAN 6-MONTHS-OLD

**The probability of exclusive breastfeeding increased approximately 7 percent with treatment.** This increase is based on a minimal intervention scenario of a 50 percent increase in cash assistance and one additional counselling visit. In a scenario where a household receives, illustratively, a 100 percent increase in cash assistance and three counselling visits, the likelihood of exclusive breastfeeding was 13 percent greater than if there was no treatment.

**Figure 3. Difference in the incremental effect of 50% additional cash and one counselling visit on exclusive breastfeeding (%)**




Many FGD participants reported that they had heard advice on breastfeeding and had acted upon it accordingly. A 24-year-old pregnant woman from a female-headed household noted that, “I wasn’t aware that I had to breastfeed for 6 months, but for now I am aware of the importance and the benefit of doing it for 6 months. Previously, I used to think the baby should be given food after three months.... [now] when I go to the clinic there is addition of weight and she [my baby] is in good health.”

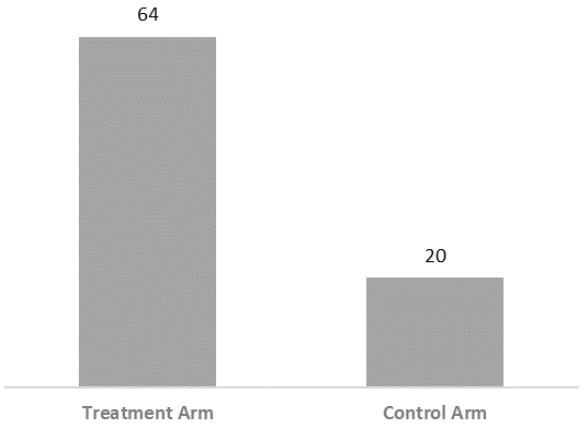
Secondary outcomes in this study are, broadly speaking, more difficult to interpret. The overall models, as reported in the tables in Annex 9, suggest limited to no effects. However, as these are based on logistic regressions in which the effects vary non-linearly, even an overall poorly fit model reveals incremental changes that can be dramatic, as individual covariates change. That is indeed the case with exclusive breastfeeding, in which the incremental outcomes steadily improve with each additional counselling visit and/or cash increase.

## MINIMUM ACCEPTABLE DIET

Despite a negative interaction term (which suggests that cash and counselling do not work synergistically), **each nutritional counselling and additional cash variables were individually positive and had statistically-significant influence on the likelihood of meeting the minimum acceptable diet criteria.**

This logistic regression DiD model revealed that the incremental effect of 50 percent additional cash and one counselling visit results in *a 44 percent increased likelihood that a household will obtain a minimally acceptable diet.*

**Figure 4. Difference in the increment effect of 50% additional cash and one counselling visit on minimum acceptable diet (%)**




Many FGD participants reported learning about the importance of a balanced diet and gave examples of changes they had made. One 23-year-old pregnant woman from Kyagwithya West, Kitui Central, recounted, “Previously I could give them [my children] porridge throughout the day, or throughout the day it would be ugali. Nowadays we mix the food with proteins and some fruits.”

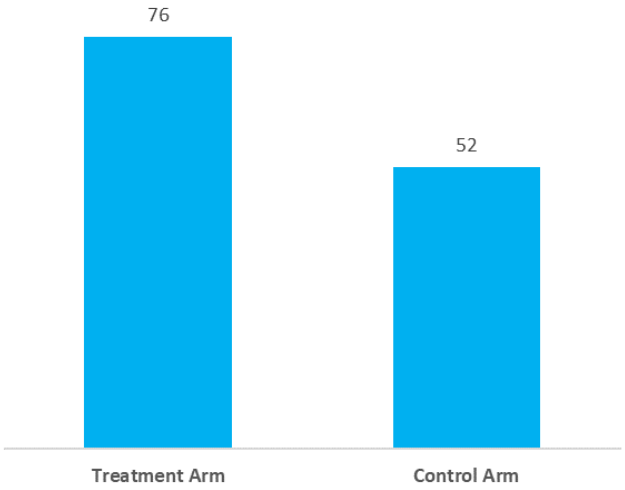
Almost all reported that they spent the cash top-up on food for their children. For example, a 30-year-old caregiver from Mulango, Kitui Central, said, “I buy food for my young baby, in particular beans, matoke, clothes, and some proteins like eggs, rice. When it comes to vegetables, I buy spinach, sukuma wiki, and other foodstuffs to make sure I give the baby a well-balanced diet.”

## HANDWASHING

**The likelihood of regular hand-washing increases by 15 percent in households enrolled in NICHE compared with the control group.**

Again, the overall model fits poorly and is not predictive, per se. But the incremental effects revealed by the logistic regression, in which changes are non-linear over the sample space, suggest that exposure to a combination of a 50 percent increase in cash over the base CT-OVC payment and a single counselling visit increases by 24 percent the likelihood of routinized handwashing compared with households with no treatment. With two visits and a 100 percent increase in cash, households were almost 40 percent more likely to adopt handwashing. Statistically-significant variables within this model include the income variable (p=0, and a positive coefficient of .3713).

**Figure 5. Difference in the increment effect of 50% additional cash and one counselling visit on caregiver handwashing practise (%)**




## ADDITIONAL RESULTS

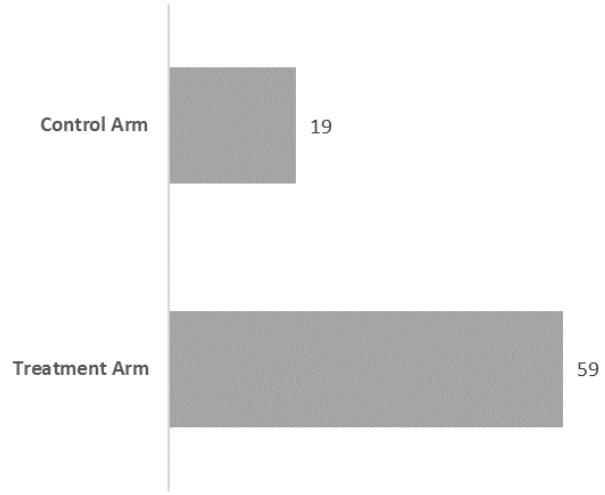
Kimetrica ran DiD models on another 19 intermediate variables and/or covariates, from WASH practices to dietary diversity. The most compelling results are described immediately below, followed by Table 5, which summarises more results. These are formally presented in Annex 9. Reported results are based on an interaction term consisting of one counselling visit and 50 percent additional cash, though results will vary (and indeed improve non-linearly) with more visits and/or cash. Incremental effects are reported in Annex 9.

By percentage of improvement between control and treatment arms, the largest effect was among households that **treated drinking water**. Households in the treatment arm were almost 40 percent more likely to actively treat their water (specifically, those households that answered 'yes' in Section 7, Question 12: 'Did you treat the water to make it safe to drink?'), than those than those in the control group (approximately 59 percent versus 19 percent). This result, moreover, is statistically significant.

It is unclear which way the direction of causation rests, but at least some difference is likely explained by NICHE participation. Importantly within this model, each cash, amount of counselling visits, and the interaction term variables (as well as the household income variable) were all statistically-significant. *NICHE has a significant effect on household treatment of water.*

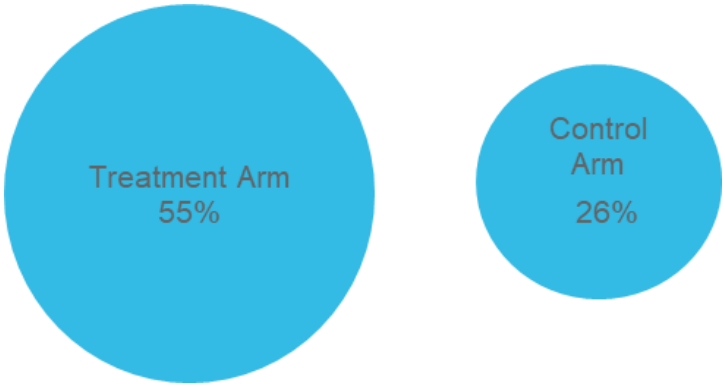
One reason NICHE may have had a positive effect on household treatment of water could be due to how easy it is to implement, as FGD participants routinely reported that boiling water before using it was easy to implement and incurred no extra costs. This is apparent in other tests reported below.

**Figure 6. Difference in the increment effect of 50% additional cash and one counselling visit on treatment of drinking water (not considering distance within 30 mins) (%)**




The presence of **household handwashing facilities** also produced a large effect. Households in the treatment arm were 29 percent more likely to have such resources in the home than those in the control arm (55 percent versus 26 percent). Given the relative ease of establishing a handwashing facility in the home, a considerable portion of this difference is likely explained by NICHE counselling and cash, in concert.

**Figure 7. Difference in the increment effect of 50% additional cash and one counselling visit on Household handwashing facilities (%)**




Similarly, the **dietary diversity of caregivers** improved by 16 percent moving from the control to treatment group.

**Improved sanitation facilities** immediately followed, with 64 percent of households in the treatment arm having access to improved facilities versus 51 percent of those in the control group, or a difference of 13 percent. For purposes of the model, 'improved sanitation facilities' consist of any of the following: flush toilet, pit latrine, ventilated improved pit latrine (VIP), pit latrine with slab and/or composting toilet.

While this finding shows that NICHE has had a positive difference, the 13 percent difference could be limited due to the costs of constructing an improved or a new latrine. A 32-year-old

caregiver from Tala, Matungulu, gave an example: “They could visit a certain home and there was no latrine in that particular home, so they advise to dig a latrine or to build some latrine. But there is shortage of money, so in such a case you find there is much difficulty in implementing this.”

**Figure 8. Difference in the increment effect of 50% additional cash and one counselling visit on Dietary diversity of caregiver (%)**

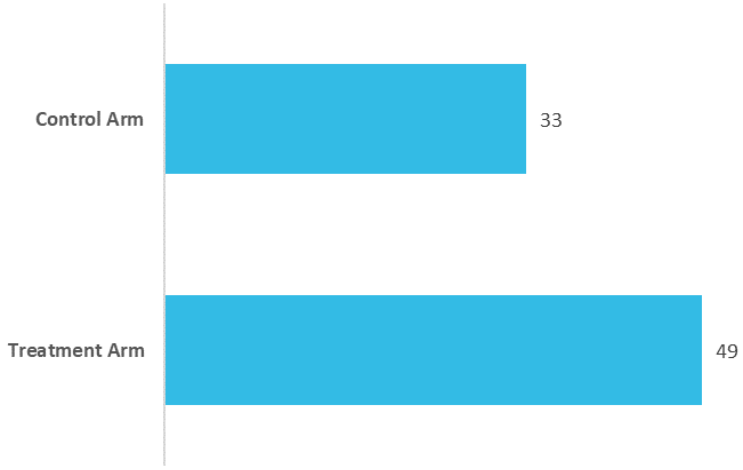
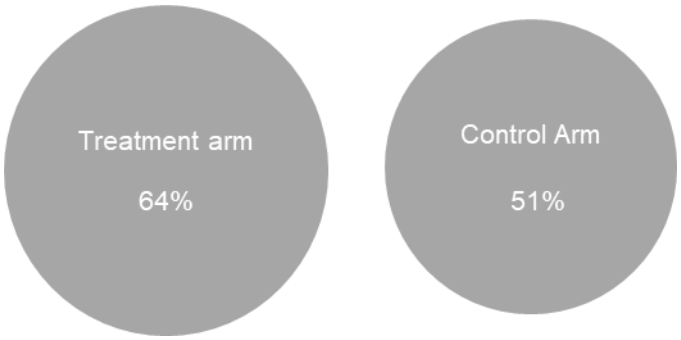



**Figure 9. Difference in the increment effect of 50% additional cash and one counselling visit on Improved sanitation facilities (%)**




Differences were more modest, but nevertheless better for NICHE households, across a range of remaining variables. These are summarised in Table 5, below. More notable results include the 11 percent difference between treatment and control groups in **complementary feeding initiation**, suggesting quite effective counselling in this regard, especially given the already high (86 percent) likelihood of it among control groups. **Early breastfeeding** improved by eight percent from control to treatment groups (85 versus 93 percent), further hinting at the role of effective counselling, while the likelihood of **routine checkups** for children increased 12 percent moving from the control to treatment group.

Of note is that households in the control groups were more likely to have experienced an illness recently, whether malarial or gastrointestinal distress (between 6 and 7 percent, respectively).

Many FGD participants noted reduced illness in their household after receiving and following CHV advice. For example, a 21-year-old pregnant woman from a female-headed household in Tala, Matungulu, said, "When it comes to the hygiene and for the young babies, we are able to control some sicknesses like diarrhoea... We were also advised on which tablets and medicines to use when they have diarrhoea."

Another woman, a 30-year-old caregiver from Mulango, Kitui Central, said, "…when I visit the washroom I know I have to wash my hands using soap and clean water… I have put up jerry cans so that other people in my household can wash their hands… We have changed a lot because before we could become sick from things that we didn't know."

**Table 5. Differences in incremental effects of cashxcounsel between treatment and control households**

| Variable | Treatment | No Treatment | Incremental Effect (based on 50% increase in cash and 1 counselling visit) |
|---|---|---|---|
| Early Breastfeeding (value of column s3q32c <=1, or hours after birth that baby is put to breastfeeding) | .931 | .852 | .0799 (or +7.9%) |
| Complementary Feeding Initiation (6-8 months) | .974 | .863 | .111 |
| Recent Diarrhoea | .388 | .455 | -.067 |
| Recent Respiratory Infection | .358 | .458 | -.099 |
| Recent Malaria | .328 | .388 | -.060 |
| Health Centre Visit | .623 | .537 | .085 |
| Routine Checkup for Child | .903 | .784 | .118 |
| Sanitary Disposal of Children's Stool* | .937 | .874 | .063 |
| Dietary Diversity of Caregiver | .490 | .332 | .158 |
| Complete Immunisation** | .350 | .320 | .030 |

*Considered sanitary disposal if the child used a toilet, or if the children's stool was put/rinsed into toilet or latrine or buried.

**Immunisation is considered complete if the child has received the following: any vaccination drops in the mouth for polio, the polio vaccination for BCG, vaccination for Hepatitis B, DPT, pneumococcal, vitamin A and rotavirus. If child is > 6 months, then MMR vaccinations.

Other variables that reveal yet more positive results include those relating to stressors and stress. The incremental effects of NICHE on **caregiver stress** and **food availability stress** were -14 percent and -.001 percent, respectively. Enrolment in NICHE, in other words (and again based on +50 percent cash over baseline and 1 counselling visit), *reduced* each caregiver stress and food availability stress, somewhat dramatically in the case of caregiver stress. It is obviously more negligible with respect to food availability stress, but it nevertheless moves down with increased exposure to NICHE.

The most ambiguous result is with **caregiver happiness**, which peculiarly is more likely to be reported by approximately .03 percent among control households. Despite this one exception as a global model, within the model, the 'counsel visits' variable is statistically significant (p=.007) and positive (.0229). In other words, while exogenous factors likely impinge on household happiness, separate from their experience in NICHE, the number of counsel visits has a direct and positive effect on caregiver happiness, pulling it upwards.

## PREGNANT WOMEN

Very encouraging results emerge from DiD models specific to the experiences of pregnant women. Tests were conducted on much smaller sample sizes overall (between 30 and 54 individuals), unfortunately, and therefore like the models above, model fit and predictiveness are poor. Moreover, with respect to routine antenatal care and delivery in health facilities, DiD models returned interaction terms with very high coefficients compared with other variables, suggesting autocorrelation. This likely reflects either an inter-dependency across variables, or the relatively short time interval between studies. These tests only explore the role of counselling, therefore, as weighted logistic regressions.

Nevertheless, incremental increases in **each dietary diversity** of pregnant women, **routine antenatal care (ANC)**, and **delivery in a health facility** increase dramatically among NICHE enrolees compared with the control group.

More specifically, the likelihood of satisfying dietary diversity criteria of pregnant women improves by 32.3 percent (from .328 to .651) among NICHE participants. The likelihood of ANC among expecting mothers receiving just counselling visits, meanwhile, increased by almost 41 percent (.173 to .583).

The likelihood of new mothers giving birth in a formal health facility increased from an already-high 88 percent to 99.8 percent, or an 11.7 percent increased likelihood—and to what is virtually universal delivery in health facilities among NICHE enrolees, also just based on counselling visits.

Table 6. Differences in incremental effects of cashxcounsel between treatment and control households for pregnant women

| Variable | Treatment | No Treatment | Incremental Effect (based on 50% increase in cash and 1 counselling visit) |
|---|---|---|---|
| Dietary diversity* | 0.652 | 0.328 | 0.323 (or +32.3%) |
| Routine ANC* | 0.583 | 0.174 | 0.409 (or +41%) |
| Deliver in health facility** | 0.998 | 0.881 | 0.117 (or +12%) |

***Variables included in model:*** 'time', 'counsel_visits', 'intensity_percent', 'cashxcounsel', 'age(years)', 'HH_size', 'income_indicator', 'trimester'

****Variables included in model:*** 'time', 'counsel_visits', 'intensity_percent', 'cashxcounsel', 'age(years)', 'HH_size', 'trimester'

As this report noted above (specifically with respect to early breastfeeding and complementary feeding initiation), the ability of NICHE to make considerable improvements in behaviours that have relatively high participation rates is striking. Given marginal returns on investments, it is usually much harder to make improvements among the last 10 percent of households, etc. NICHE households, in contrast, were more likely to embrace these three behaviours to near universal levels.

Additionally, if tracing the causal logic chain from improved diet during pregnancy, further combined with enhanced access to professional health services during pregnancy and during birth, NICHE could make dramatic improvements in the health of both young mothers and children where it is undertaken.

## SUMMARY

Statistical results cannot definitively demonstrate any sort of overwhelming influence of the NICHE programme on households, particularly around stunting, wasting and underweight young children. With that clearly stated, however, the consistency of positive intermediate results demonstrated by treatment versus control households is impressive. Across a range of experiences reflecting healthy behaviours, hygiene, diet and nutrition and even stress, NICHE (cash and counselling combined) had large and sometimes dramatic incremental influences. With respect to treating drinking water, it has a large and statistically significant, positive effect.

The limitations of the statistical analysis overall more likely reflect smaller sample sizes than anticipated because of dropout and necessary exclusion, the limited time frame of the study and irregular rollout, as well as a dynamic environment in which not all factors are controlled for (e.g. distances to markets and banks).

Broadly speaking, the positive quantitative results are reinforced by qualitative findings, explored in detail in the Qualitative Analysis section, in which respondents overwhelmingly reported the relevance and utility of CHV visits and information. Respondents specifically cited enhanced and more routinized handwashing practices as a direct result of CHV visits. Exclusive breastfeeding was also cited in FGDs as relevant and practical.

At the same time, the sometimes unclear or less impressive statistical results are also to a great extent explained by qualitative work. Qualitative data reveal the experiences of participants on the ground, sometimes struggling to access anticipated pay-outs or struggling to decipher less coherent and irregular visits from CHVs. This feedback is also important in understanding what might have limited the early impacts of NICHE and how its potential, highlighted above, can be maximized going forward.

# QUALITATIVE ANALYSIS

This section presents the qualitative findings from the FGDs and IDIs conducted with NICHE beneficiaries (see Annex 10 for a summary of these), as well as the results of qualitative data collected in the household survey. Specifically, it addresses findings that directly bear on the relevance, efficiency and effectiveness of the NICHE programme, noting possible constraints on these factors as well as the programme's sustainability. Illustrative quotes are presented alongside FGD and IDI findings to underscore resonant themes. All FGD participants were either caregivers or pregnant women at the time of the survey and are thus referred to as such when quotes are presented. Unless otherwise stated, they were all farmers and from a male-headed household.

## FGD AND IDI FINDINGS

### Relevance

**Women regarded information from the CHVs to be "relevant" to their situations, and households reported positive behaviour changes.** FGD participants provided consistent and overwhelmingly positive feedback regarding the relevance of information provided by CHVs. A majority reported that the information was new and that they, when able to put lessons into practice, directly observed improvements in the health and well-being of their families. Respondents reported that especially easy lessons/behaviour changes to implement were:

- exclusive breastfeeding in the first 6 months;
- handwashing at critical times, and establishing a handwashing station with soap and flowing water from a jerry can;
- boiling water before consumption; and
- cleaning the compound of solid waste and burning or burying it in a waste pit.

For example, a 30-year-old caregiver from Mulango, Kitui Central, said that, "...when I visit the washroom I know I have to wash my hands using soap and clean water… I have put up jerry cans so that other people in my household can wash their hands… We have changed a lot because before we could become sick from things that we didn't know."

Another respondent, a 49-year-old caregiver from Kathiani, added that, "It was easy for me to make a utensil rack for washing dishes and drying them in the sun, to start using jerry cans in the washrooms, and also to dig a pit to dispose of waste there. Even sometimes a young child can do that because it is an easy job."

Another caregiver, aged 32 and from Tala, Matungulu, said, "…before, I never used to breastfeed for six months and I kept going to hospital with some sickness of the babies. But now, with [my most recent] child, there is no diseases. I breastfed them for six months and I can see changes, so I'm very happy about that."

**Information from CHVs would also be relevant to non-CT-OVC households.** Participants from across the FGDs suggested expanding the nutritional counselling to other households,

noting that others in their community who had not received CHV visits continued to practise poor behaviours, further underscoring the programme's relevance to recipients.

A 28-year-old caregiver from Tala, Matungulu and Kangundo, said, "The balanced diet should be given more emphasis [coverage], many people are not eating a balanced diet currently – they eat matoke and potatoes and they are the same group of food."

A 49-year-old caregiver from Kathiani said, "For example, in my location, there is only one CHV so when she comes to the place, she is the one generous enough to call others to be educated at the same time. So, if all goes well, it would be good to have more."

**The information received from CHVs was comprehensive.** Aside from one woman, who was registered as a caregiver but also had a small baby and reported that she did not receive information about breastfeeding, every FGD participant said she could not think of any important topics that were missing or other topics that should be covered in the nutritional counselling. The only suggestion for additional information came from Kitui Central, where participants reported that they had been taught about budgeting, which they had found informative and useful, and consequently recommended that this component be expanded to other households.

In sum, FGDs revealed that NICHE programming is overwhelmingly perceived as relevant, particularly the nutritional and hygiene counselling. Participants from across the implementation area were uniform in their praise of the counselling and its content, attributing personal and household-level behaviour changes to these events and the sessions with CHVs.

### Effectiveness

**Certain behaviour changes, particularly those with higher costs, were hampered by insufficient cash for key expenditures.** Some FGD participants said that the additional cash they receive was sometimes insufficient to implement lessons learnt during CHV visits, such as building latrines, establishing productive kitchen gardens with access to water, pesticides and seedlings, and purchasing hens. Whereas small but nevertheless important expenditures, such as for treating water or setting up handwashing stations, are attainable, some expenses, such as building latrines, are significant and thus remain out of reach for the poorest households. According to qualitative feedback, in most settings, the cash was sufficient to diversify household diets, but this was not always the case.

A 27-year-old pregnant woman, a businesswoman from a female-headed household in Kangundo, Matungulu, explained, "I was advised to have an additional toilet because we have a large homestead so one toilet is not enough for us as we are many. We started the project [of building an additional toilet] but were unable to finish because of shortage of money for the materials such as cement." Her household had seven members.

Similarly, a 29-year-old pregnant woman from Mangelu, Kitui West, argued that, "We get 500 Ksh per month, and when you get 500 Ksh per month, you can't get anything. For example, you have a small baby, for your baby you want diapers, you want one packet it costs 250 Ksh. You want to buy like a hen, a hen is like 700 Ksh, so [the top-up] is very little for us to manage."

**While costlier infrastructure simply correlates with NICHE programming, smaller investments in WASH are a result of NICHE.** Quantitative findings show strong correlations between NICHE and the presence of improved sanitation facilities (more expensive) and handwashing stations (less expensive). While the direction of causation stemming from the quantitative analysis remains uncertain, qualitative feedback assists in more precisely understanding these results. Specifically, qualitative findings suggest that costlier infrastructure (like improved latrines) simply correlate with, and possibly augment, NICHE programming. On the other hand, small, purposeful investments in soap and water treatment are a result of and are supported by NICHE, and specifically the synergistic effects of targeted counselling and cash top-ups.

**The most frequent request from FGD participants and IDIs across sites was that the amount of the cash top-up be increased.** When asked how much participants thought the additional top-up should be, responses ranged between 1,000 to 1,500 Ksh (about USD 10 to 15) per child per month. Other participants requested direct transfer of materials, such as slabs and cement for constructing latrines, and water tanks for kitchen gardens.

Cash amounts were routinely debated, with most understandably arguing for its increase. When pressed, however, respondents were nevertheless broadly able to point to positive behaviour changes in health and nutrition directly linked to the additional cash, indicating its direct role in incremental and positive changes.

**Households saw health benefits as a result of behaviour changes.** In particular, beneficiaries identified weight gain in their babies from exclusive breastfeeding and less illness since adopting better hygiene behaviours.

A 44-year-old caregiver from Kiseveni, Kitui West, said, “When [the CHVs] went to my place, I didn’t have a pit latrine. Then they told me about hygiene. After that, we put into practise what we were told about the hygiene. Previously we had some issues of diseases and health, but after that we are comfortable, no diseases, no problems when it comes to health. I didn’t know how to give young one’s balanced diet and how to cook for them. Then my home received peace - I talk of peace, because before they kept complaining of health problems, we were going to the hospital with problems, and now we have peace after we were chosen to join the programme.”

Another caregiver, a 30-year-old woman from Mulango, Kitui Central, said, “Since I received the money, I have seen changes when it comes to the health of the baby. In those days, when my baby attended the clinic, she was just cutting weight and cutting weight, not gaining, but nowadays she is in good health, she has improved and gained weight.”

**Kitchen gardens were perceived as offering many benefits.** Many beneficiaries said the kitchen gardens allowed them to save money that they would normally have spent on food, sell surplus to generate cash, and provide nutritious food for their families.

A 21-year-old pregnant woman from a female-headed household in Tala, Matungulu, described the benefits of kitchen gardening: “I was advised to start kitchen gardening… and now I am able to plant vegetables for the children because if you grow them yourself you can control the inputs of fertilizer. So, the vegetables are always fresh and good for the young

babies… When we plant vegetables in the kitchen garden, we can save some money which we would otherwise use to go to the market and purchase those vegetables."

**Although participants were overall positive about the nutritional counselling, they voiced frustration about the lack of communication around CHV visits.** Regarding the scheduling of CHV visits, a 40-year-old caregiver from Kiseveni, Kitui West, said, "For example, those community health workers, they come on Monday, skip a day and come on Wednesday. Another week they come on Tuesday, they come on Friday, so there is regular visits but different days." The major complaint regarding CHV visits was that beneficiaries were not told when the CHV would call back again.

### Efficiency

**The distribution of cash through banks entailed time and transport costs for beneficiaries.** The current system, whereby participants receive money through banks and collect it at the bank or through agents, resulted in many wasted journeys and high transport costs, particularly for households in remote rural areas.

The overwhelming majority of complaints regarding the programme focused on problems accessing the cash transfers (both CT-OVC and the additional cash). Respondents reported that there was a lack of communication about when the money was available for collection, congestion in banks, ATMs not working, agents running out of cash and transport costs to reach the banks. Transport costs of 100 Ksh (about USD 1) were often reported, though it could be much more if beneficiaries had to make repeat visits to the bank due to one of the previously-listed problems.

A 55-year-old caregiver living in a female-headed household in Mulango, Kitui Central, noted, "I come from a long distance, from where I have to pay 100 Ksh… Sometimes I arrive at the bank and I find [the money] was not distributed in the account so I can't get it at that time."

**These issues suggest that moving to M-Pesa[3] could improve the efficiency of the cash transfer, an option which beneficiaries widely reported they would prefer.** Citing these problems and associated costs, beneficiaries frequently said that they would prefer to receive the cash through M-Pesa. As a 23-year-old pregnant woman, a student from a female-headed household in Musene, Kitui Central, suggested, "If we can be sent the money via M-Pesa it will be much more effective, because if we have to come to get the money from the bank we have to spend some on transport." However, if M-Pesa is adopted, there also needs to be a consideration for those without phones.

**Participants suggested they would prefer to receive money monthly.** This topic was not raised in all FGDs, but all participants in an FGD in Kitui Central (FGD 3) said they would prefer to receive money monthly, rather than bi-monthly as in the current system.

**Some FGD beneficiaries also reported not receiving the additional cash or experiencing other issues receiving the cash.** For example, one participant in an FGD in Kitui Central (FGD 4), who was pregnant during the study, reported that although she had twins, she only

[3] A popular mobile money system used in Kenya to send and receive money between individuals/institutions and to carry out bank transactions such as withdrawal and deposits.

received money for one child. Though she had reported this issue to CHVs, she had received no response.

Another FGD participant, a 23-year-old pregnant woman from Kyangwithya East, Kitui Central, said, “Last month I never received the cash [CT-OVC and additional cash]. I was told there was no money in my account so even if I swiped the card there was no money. We complained to the people who go around and the bank, but they are still doing follow-up until today.”

Similarly, a 30-year-old pregnant woman from a female-headed household in Kivaani, Matungulu said, “My mother-in-law is the one who used to receive the money, but after she passed away [last year] I haven’t been able to access the money, for the reason that we have the card, but we don’t have the pin. We have been following up with the regional office, but we still have not been receiving [the transfer].”

**There is marked seasonality in prices, main sources of food and use of the additional cash transfer.** In the wet season, FGD respondents mostly relied on food from their kitchen gardens. In this season, they were even able to save some of the cash they received for emergencies or non-food items, such as clothing and school fees for children, or seedlings and pesticides for kitchen gardens. However, in the dry season, the same respondents relied much more on food from markets and tended to spend the money they received immediately on food items.

The prices for food also increased in the dry season, so that the money they received did not purchase as much as it would have during the wet season. As an example, in an FGD in Kathiani (FGD 7), participants reported that 1 kilogram of beans could cost around 80 Ksh (about USD 0.80) during the wet season but could increase to 120 Ksh (about USD 1.20) during the dry season.

## QUALITATIVE FEEDBACK FROM THE HOUSEHOLD SURVEY ON NUTRITIONAL COUNSELLING AND CASH TRANSFERS

### Nutritional counselling

**Treatment households performed better on the endline quiz to test knowledge gained.** For the endline survey, a set of questions designed to test the nutritional knowledge of the households was added to the household survey (Section 12). The aim was to see if between baseline and endline (January 2017 to June 2018 in Kitui, and October 2017 to June 2018 in Machakos) there would be a difference in knowledge between the control and treatment households. The findings from the quiz show that the intervention arm did better than the control arm in terms of knowledge gained, with 92 percent of the intervention arm, and 73 percent of the control arm, achieving a score of at least seven out of nine correct responses.

**The vast majority of households were satisfied with CHV visits and changed their behaviours after receiving counselling.** Apart from four households who had either not been visited by a CHV or were visited very rarely, all households reported satisfaction with the number of CHV visits. At endline, the total reported number of CHV visits per household for the study period ranged from two to 152, with an average of 38 visits. All participants reported

that the information received was constructive and that they were satisfied with how CHVs conducted themselves.

The word cloud in Figure 2, below, represents the words most used by respondents when discussing their CHV experiences. While some words (for example, “child”) may be a function of the topic at hand, “taught, “learned,” “knowledge,” and “educate” broadly reflect well on the experience, and also include action verbs that suggest meaningful visits.

**Figure 10. Word cloud of households most-mentioned words when describing CHV visits**


Almost all households (97 percent) reported changing behaviours due to the counselling received. They nevertheless suggested that the counselling could be improved by:

- Increasing the diversity of topics covered
- Increasing the frequency
- Expanding to the rest of the community

**Beneficiary learning forums (BLFs) were well-attended and effective but could be made more accessible.** Ninety seven percent of households in the intervention arm had attended BLFs in the last six months leading up to the endline, and 96 percent reported having changed their behaviour as a result of attending such sessions. Some suggestions emerging from the survey on how to improve the BLFs included providing transport to BLFs and hosting BLFs closer to participating homes.

### Cash transfers

**Cash was mostly spent on food and children’s requirements.** Households reported spending most of the cash transfers on food (94 percent), the child’s needs (56 percent) and school fees (60 percent). Most of the households as of the June 2018 endline reported having already spent 100 percent of the most recent cash transfer (distributed in April/May 2018).

**Few households experienced delays in receiving the additional cash and the transfer was considered to be efficient.** Households in the intervention arm were also asked

questions regarding their overall experience with the programme. Most households (95 percent) did not wait longer than planned for the additional cash transfer. The majority of those reporting problems had either never received the cash or had received it only a few times, and sporadically. Both the efficiency of the disbursement of the usual CT-OVC cash and the additional cash had an average rating of 2 on a scale of 1-5, with 1 being very efficient and 5 being not efficient at all.

**Many households said the amount of the additional cash was not enough, and a small number reported that NICHE had not allowed them to improve, though causality is not clear.** That many households felt the amount of the additional cash was insufficient echoes the findings from FGDs and IDIs. Specifically, most households (96 percent) reported that the additional cash was inadequate to buy the additional food items that they learned about during counselling. While the majority reported very positive experiences, some households (about 40, or approximately 5 percent) said the additional NICHE cash transfer and nutritional counselling had not enabled them to improve the way they look after the child or themselves when pregnant.

It was not entirely clear, for these households, what interfered with the programme's effectiveness, but based on qualitative feedback from FGDs and IDIs, complaints centred on the timeliness and consistency of payments and its limited purchasing power. Counselling was almost universally praised and appears to have had direct influence on nutritional, health and WASH outcomes. How long this effect persists is less clear from the acquired data.

# DISCUSSION

After a review of both the quantitative and qualitative data, it is clear that NICHE is most effective when cash is readily available, relatively costless and predictable to obtain. Its real potential to improve household and children's nutrition and welfare is unlocked, however, when paired with counselling visits.

Quantitative data suggest that the biggest gains were made when smaller, more affordable purchases, such as soap or dietary inputs, were paired with lessons, such as on handwashing and dietary diversity, respectively. Counselling visits were widely lauded, and FGD participants reported satisfaction, generally, with CHV conduct, and the topics, frequency, comprehension and utility of lessons.

The quantitative analysis does not reveal any overwhelming results, statistically, but more fine-grained interpretations are in fact encouraging. It should not be surprising, given the initial delays in implementation and coverage, and the complications of the data themselves, that DiD models are not statistically significant, or more predictive (well fitted) overall, and therefore this should not be considered a set-back, we argue.

While, again, no evidence suggests that NICHE reduced stunting, wasting or underweight among children, the building blocks for making headway against these more intractable and complex challenges are being laid.

The incremental changes revealed by the logistic regressions of secondary results are very positive.

Other encouraging results are revealed by DiD models that test for the relationship between exposure to NICHE and a range of healthy behaviours like diversifying diets, establishing handwashing stations or complementary breastfeeding. In these cases, households exposed to NICHE are universally more likely to engage in such practices.

A range of additional intermediate variables demonstrate more modest effects, but nevertheless uniformly positive relationship to NICHE exposure (with the single exception of caregiver happiness, even though ‘counselling visits’ within this model is positive, and significant). These include hygienic practices, recent illnesses and child health care visits. Meanwhile caregiver stress and food availability stress also respond to NICHE.

Finally, despite small sample sizes which reduce confidence and significance, NICHE appears to have important effects on pregnant women. As described above, incremental increases in each dietary diversity of pregnant women, routine antenatal care (ANC), and delivery in a health facility increased dramatically among NICHE enrolees compared with the control group. Sustaining these results would directly and positively affect the well-being of young children and mothers, and may in turn reduce stunting, wasting and underweight going forward.

These findings are reinforced by qualitative investigations, where respondents widely cited the value and relevance of CHV visits and acknowledged household behaviour change favouring improved hygiene and diet. Where quantitative data are ambiguous, qualitative data help explain outcomes. For instance, cash assistance appears to have helped with the purchase

of small, but nevertheless important inputs, like handwashing stations. More expensive outlays, like for a pit latrine or improved sanitation facility remained mostly out of reach still (even if NICHE houses are more likely to possess improved facilities).

Qualitative findings underscore some challenges as well, with respect to accessing payments and, unsurprisingly, the amounts. But these complaints were generally offset by positive feedback, particularly around counselling visits, their content, their relevance, and even frequency.

In sum, *the combination of qualitative and quantitative findings from this evaluation, when taken together, indicate positive early outcomes stemming directly from NICHE.*

# CONCLUSIONS

This evaluation found that counselling and cash transfers, coupled as they are in NICHE, improved well-being for participating households, as defined by the variables explored in this evaluation. Results are not overwhelming, and ultimately hint, rather than point decisively, towards the role NICHE can play in addressing stunting, wasting and underweight among children.

Indeed, little progress was made as determined by changes in z-scores among these three metrics. However, the consistency with which treatment households perform better (sometimes far better) across a diverse range of household behaviours and characteristics suggests that, should NICHE be sustained or scaled-up, it could help turn the corner on these more challenging fronts.

# LESSONS LEARNT AND RECOMMENDATIONS

This section summarizes lessons learned and recommendations, divided by each the evaluation and its conduct, and for NICHE implementation. We recognise that, given that NICHE is embedded within the Government of Kenya national CT programme, some of these may not be implementable or feasible by UNICEF alone.

## LESSONS LEARNT

### FOR THE EVALUATION

- The evaluation found that the interventions (the cash top-up and nutritional counselling) were not always implemented consistently across locations and that there were delays, though this improved after the first few months of programme implementation. As discussed in the Results section above, this is likely to have negatively influenced the potential gains from NICHE programming that could have been captured through this evaluation. It is thus crucial that interventions are properly timed and implemented consistently to obtain the maximum benefits from the NICHE intervention.
- While verification exercises were conducted both before the January and October baselines, a number of households were later determined to be ineligible, nevertheless. This therefore highlights the importance of in-depth probing, especially considering the high mobility of caregivers and children of the target population, which was also used during subsequent surveys to verify household eligibility.
- The involvement of the County Government representatives during all surveys was crucial to ensuring that fieldwork was carried out smoothly. The active participation of government partners enabled the Kimetrica team to operate with no major issues and to be supported by local authorities when needed.
- NICHE households were sometimes unable to comment on the nutritional counselling received under the programme, and the Kimetrica team had to probe extensively, given that CHVs did not always wear easily recognizable items (such as their uniforms). Wearing these items during all household visits would have enabled a swifter recognition of the CHVs and their role in NICHE.

### FOR NICHE AND IMPLEMENTATION

- The decision to use an existing government system (the CT-OVC cash transfer programme) was important as it allowed for implementation to be mostly smooth (despite some delays in the cash transfers), given that the system was pre-existing.
- Collaboration between the NICHE partners and the Government's involvement and ownership of the programme were both instrumental in facilitating its rollout. For example, the collaboration between the Children's Office, the Ministry of Health, and the Kimetrica survey team was effective throughout all surveys conducted.
- The expansion and implementation of the NICHE programme to Machakos County was relatively more efficient than the one in Kitui County, given that the programme successfully acted on previous lessons learned.
- Findings from both the quantitative and qualitative data suggest that while the cash top up allowed beneficiary households to make meaningful changes, the amount was not

always sufficient to do so, or limited households to small purchases. Cash transfer programs need to put into consideration of cost of diet and cost of living in the context of the intervention.

- The evaluation found that there is space for improvement in terms of communication with beneficiaries from programme implementers. For example, some beneficiaries were not aware that they had to swipe their card twice to access their designated cash and were similarly unaware of delays in cash transfers that cost them time and money. It will, therefore, be important in future contexts to communicate effectively to beneficiaries on the functioning of the cash transfer system.

# RECOMMENDATIONS

The following recommendations were developed from the following: solutions developed for the challenges faced as the study progressed; observations by Kimetrica as an independent evaluator; during the NICHE stakeholder meetings; through analysis of some of the data collected; and from the feedback collected from the study participants.

## FOR THE LISTING AND VERIFICATION TEAM

- In order to avoid problems with falsification in eligibility for this initiative, it is critical that the information provided to the community discourages this practice and that checking systems are in place. Safeguards should be enacted to ensure that the verification exercises are well monitored, reducing the number of falsifications during enrolment.

## FOR CASH TRANSFER IMPLEMENTORS

- Explain and communicate to beneficiaries any changes to the programme. This will ensure better uptake of activities. (For example, swiping the designated card twice to collect the additional cash transfer, as also noted above.)
- Consider adding an MPESA (or similar) option, which would avoid problems related to visiting banks, which can be distant and incur extra costs, at times equal to the cash transfer being received, erasing its effect entirely. Additional challenges include ATMs that are not working, long queues at the bank and a lack of information as to when the money has been deposited.
- Consider providing the cash transfer on a monthly basis, rather than a bi-monthly basis, and increasing the value of the transfer to align with other such programmes.
- Consider fluctuating cash amounts to correspond to seasonal food price increases during the dry season.

## FOR NUTRITIONAL COUNSELLING IMPLEMENTORS

### General

- Improve efficiency: more timely delivery and more frequent visits from the CHVs and beneficiary learning forums, especially.
- Conduct beneficiary learning forums closer to the target beneficiary households, thus reducing travel distance and transit time, thereby increasing attendance and uptake of the counselling messages.

- Continue to reinforce best practice activities, particularly those that are not expensive (For example, boiling water, handwashing with soap, exclusive breastfeeding, and information on how to grow vegetables and how to budget).
- NICHE beneficiaries were encouraged by CHVs to grow their own vegetables. While some households were successful, others struggled because of a lack of water. Consider supporting beneficiaries with lessons on safe water storage, and possibly most-appropriate kitchen garden site locations, through CHV visits.

### During Households visits

- Encourage CHVs to provide information regarding when they will revisit to ensure that beneficiaries are present; establish a schedule.
- Encourage the participation of male household members in nutritional counselling sessions since they are the key decision-makers in some households, particularly when it comes to how the cash transfer is spent.

# BIBLIOGRAPHY


Ahmed, U. A., Hoddinott, J. F., Roy, S., Sraboni, E., Quabili, W. R. and Margolies, A. (2016). Which Kinds of Social Safety Net Transfers Work Best for the Ultra Poor in Bangladesh? Operation and Impacts of the Transfer Modality Research Initiative. IFPRI and WFP.

Attanasio, O., Gomez, L. C., Heredia, P. and Vera-Hernandez, M. (2005). The Short-Term Impact of a Conditional Cash Subsidy on Child Health and Nutrition in Colombia. The Institute for Fiscal Studies Report Summary: Familias 03. Centre for the Evaluation of Development Policies.

Bhutta, Z. A., Ahmed, T., Black, R. E., Cousens, S., Dewey, K., Giugliani, E., Hader, B. A., Kirkwood, B., Morris, S. S., Sachdev, H. P. S. and Shekar, M. (2008). What works? Interventions for maternal and child undernutrition and survival. *The Lancet*, 371(9610), p. 417-440.

Bhutta, Z.A., Das, J.K., Rizvi, A., Gaffey, M.F., Walker, N., Harton, S., Webb, P., Lartey, A., & Black, R.E. (2013). Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost? *The Lancet Nutrition Intervention Review Group, and the Maternal and Child Nutrition Study Group.*

Billah, S. M., Ferdous, T. E., Karim, M. A., Dibley, M. J., Raihana, S., Moinuddin, M., & El Arifeen, S. (2017). A community-based cluster randomised controlled trial to evaluate the effectiveness of different bundles of nutrition-specific interventions in improving mean length-for-age z score among children at 24 months of age in rural Bangladesh: study protocol. *BMC public health*, *17*(1), 375.

Branas, C.C, Cheney, R.A., MacDonald, J.M., Tam, V.W., Jackson, T.D., & Have, T.R.T. (2011). A Difference-in-Difference Analysis of Health, Safety, and Greening Vacant Urban Space. *American Journal of Epidemiology*

Buser, T., Oosterbeek, H., Plug, E., Ponce, J. and Rosero, J. (2014). The Impact of Positive and Negative Income Changes on the Height and Weight of Young Children. The Institute for the Study of Labor (IZA) Discussion Paper No. 8130.

Checkley, W., Gilman, R. H., Black, R. E., Epstein, L. D., Cabrera, L., Sterling, C. R., & Moulton, L. H. (2004). Effect of water and sanitation on childhood health in a poor Peruvian peri-urban community. *The Lancet*, *363*(9403), 112-118.

Cumming, O., & Curtis, V. (2018). Implications of WASH Benefits trials for water and sanitation. *The Lancet Global Health*.

de Groot, R., Palermo, T., Handa, S., Ragno, L.P. and Peterman, A. (2015). Cash Transfers and Child Nutrition: What We Know and What We Need to Know. Innocenti Working Paper No. 2015-07, UNICEF Office of Research, Florence.

Devereux, S. (2016). Why does social protection improve food security but not nutrition? Presentation at the World Nutrition Cape Town 2016 - World Public Health Nutrition Association's World Nutrition Congress, 2 September 2016.

Dewey, K. G., & Mayers, D. R. (2011). Early child growth: how do nutrition and infection interact?. *Maternal & child nutrition*, *7*(s3), 129-142.

DSD, SASSA and UNICEF. (2012). The South African child support grant impact assessment: Evidence from a survey of children, adolescents and their households.
Pretoria: UNICEF South Africa.

Food and Agriculture Organization of the United Nations (2015). Nutrition and Social Protection.

Fenn, B., Sangrasi, G.M., Puett, C., Trenouth, L., & Pietzsch, S. (2015). The REFANI Pakistan study—a cluster randomised controlled trial of the effectiveness and cost-effectiveness of cash-based transfer programmes on child nutrition status: study protocol. *BMC Public Health*

Fenn, B.; Colbourn, T.; Dolan, C.; Pietzsch, S.; Sangrasi, M.; Shoham, J. (2017). Impact evaluation of different cash-based intervention modalities on child and maternal nutritional status in Sindh Province, Pakistan, at 6 mo and at 1 y: A cluster randomised controlled trial. PLoS Med. 2017, 14, e1002305.

Gertler, P. (2004). Do Conditional Cash Transfers Improve Child Health? Evidence from PROGRESA's Control Randomized Experiment. *The American Economic Review*, 94(2), p. 336-341.

Grellety, E., Babakazo, P., Bangana, A., Mwamba, G., Lezama, I., Zagre, N. M., & Ategbo, E. A. (2017). Effects of unconditional cash transfers on the outcome of treatment for severe acute malnutrition (SAM): a cluster-randomised trial in the Democratic Republic of the Congo. *BMC medicine*, *15*(1), 87.

Guyatt, H. L., Della Rosa, F., Muiruri, F., Nussbaumer, E. and Campion, A. (2016). Researching the Outcome and Impact of the Nutritional Improvements through Cash and Health Education (NICHE) Programme on the First 1,000 Days of Life in Kitui County, Kenya: Inception Report.

Guyatt, H., Della Rosa, F., Turnbull, S. (2017). Qualitative Evaluation of Nutritional Counselling in Kitui County: Focus Group Discussions with WFP CFA beneficiaries exposed to the Shika Tano campaign.

Hagen-Zanker, J., Bastagli, F., Harman L., Barca, V., Sturge, G., and Schmidt, T. (2016). Understanding the impact of cash transfers: the evidence. Overseas Development Institute (ODI)

Holmes, R. and Bhuvanendra, D. (2013). Social protection and resilient food systems: The role of cash transfers. Overseas Development Institute (ODI)

Langendorf, C., Roederer, T., de Pee, S., Brown, D., Doyon, S., Mamaty, A. A., ... & Grais, R. F. (2014). Preventing acute malnutrition among young children in crises: a prospective intervention study in Niger. *PLoS medicine*, *11*(9), e1001714.

Luby, S. P., Rahman, M., Arnold, B. F., Unicomb, L., Ashraf, S., Winch, P. J., ... & Leontsini, E. (2018). Effects of water quality, sanitation, handwashing, and nutritional interventions on diarrhoea and child growth in rural Bangladesh: a cluster randomised controlled trial. *The Lancet Global Health*, *6*(3), e302-e315.

Manji, A. (2015). NICHE: Nutritional Improvements Through Cash and Health Education a Programme of Nutrition Focused Social Transfer in the Arid and Semi-Arid Lands of Kenya, Inception Report. UNICEF.

Matthews, J. N. S. (2006). Introduction to Randomized Controlled Clinical Trials. Chapman and Hall, New York, 2nd edition.

Merttens, F., Hurrell, A., Marzi, M., Attah, R., Farhat, M., Kardan, A. and MacAuslan, I. (2013). Kenya Hunger Safety Net Programme Monitoring and Evaluation Component: Impact Evaluation Final Report: 2009 to 2012. Oxford Policy Management (OPM).

Miller, C., Tsoka, M., & Reichert, K. (2010). Impacts on children of cash transfers in Malawi. *Social protection for Africa's children*, 96-116.

Miller, C. M., Tsoka, M., & Reichert, K. (2011). The impact of the Social Cash Transfer Scheme on food security in Malawi. *Food policy*, *36*(2), 230-238.

Null, C., Stewart, C. P., Pickering, A. J., Dentz, H. N., Arnold, B. F., Arnold, C. D., & Hubbard, A. E. (2018). Effects of water quality, sanitation, handwashing, and nutritional interventions on diarrhoea and child growth in rural Kenya: a cluster-randomised controlled trial. *The Lancet Global Health*, *6*(3), e316-e329.

Pickering, A.J., Djebbari, H., Lopez, C., Coulibaly, M., & Alzua, M.L. (2018). Effect of a community-led sanitation intervention on child diarrhoea and child growth in rural Mali: a cluster-randomised control trial. *The Lancet, Vol 3, 701-711.*

Puhani, P.A. (2008). The treatment effect, the cross difference, and the interaction term in nonlinear "Difference-in-Differences" models*. IZA Discussion Paper No. 3478*

Rah, J.H., Cronin, A.A., Badgaiya, B., Aguayo, V.M., Coates, S., & Ahmed, S. (2015) Household sanitation and personal hygiene practices are associated with child stunting in rural India: a cross-sectional analysis of surveys. *BMJ Journals.*

Renzaho, A., Chitekwe, S., Chen, W., Rijal, S., Dhakal, T., & Dahal, P. (2017). The Synergetic Effect of Cash Transfers for Families, Child Sensitive Social Protection Programs, and Capacity Building for Effective Social Protection on Children's Nutritional Status in Nepal. *International Journal of Environmental Research and Public Health*, *14*(12), 1502.

Richard, S. A., Black, R. E., Gilman, R. H., Guerrant, R. L., Kang, G., Lanata, C. F., ... & Checkley, W. (2013). Diarrhoea in early childhood: short-term association with weight and long-term association with length. *American journal of epidemiology*, *178*(7), 1129-1138.

UNICEF (2012). Nutrition Glossary: A resource for communicators.

UNICEF (2013). Improving Child Nutrition: The achievable imperative for global progress

UNICEF-ESARO (2015). Social Cash Transfer and Children's Outcomes: A Review of Evidence from Africa.

Wolf, J., Hunter, P. R., Freeman, M. C., Cumming, O., Clasen, T., Bartram, J., & Prüss- Ustün, A. (2018). Impact of Drinking Water, Sanitation and Hand Washing with Soap on Childhood Diarrhoeal Disease: Updated Meta- Analysis and–Regression. *Tropical medicine & international health*.

WHO (2006). Multicentre Growth Reference Study Group: WHO Child Growth Standards: Length/ height-for-age, weight-for-age, weight-for-length, weight-for-height and body mass index-for-age: Methods and development. Geneva, World Health Organization.

WHO (2008). Indicators for assessing infant and young child feeding practices - Part 1, Definitions. Conclusions of a consensus meeting held 6-8 November 2007 in Washington DC, USA.

WHO (2018). Core questions and indicators for monitoring WASH in health care facilities in the Sustainable Development Goals.

WHO and UNICEF (2009). WHO child growth standards and the identification of severe acute malnutrition in infants and children *A Joint Statement by the World Health Organization and the United Nations Children's Fund.*

World Bank (2013). Revisiting z-scores: A review of LSMS-ISA Anthropometric Data, The World Bank, as presented at the LSMS-ISA Annual Workshop 2013, Addis Ababa, Ethiopia

# ANNEX 1. NUTRITIONAL INFORMATION[4]

This annex summarises the nutritional messages being disseminated by each of the platforms in the NICHE programme: CHVs, beneficiary forums and SMS messages.

**CHV visits**

The CHV visits were initiated in May 2017 for the January cohort and November 2017 for the October cohort. The material used for the nutritional counselling was the Ministry of Health maternal, infant and young child counselling card. The visits covered the following eight modules:

- Maternal nutrition
- Feeding infants 0-6 months
- Complementary feeding (6-23 months)
- Feeding in special circumstances
- Essential hygiene actions
- Growth monitoring and promotion
- Developmental milestones
- Household food and nutrition security.

**Beneficiary learning forums**

The beneficiary learning forums (BLF) brought together a few members of households from the treatment arm. A BLF would comprise of 15 participants and would include:

- The CT-OVC beneficiary from the households.
- Primary caregivers/ the pregnant mothers in the treatment arm.
- CHVs assigned to the participating households
- Representatives from the Ministry of Health, including the Community Health Extension workers (CHEW) in-charge of the ward, a nutrition officer, a community strategy focal person/ public health officer.
- A representative from the Children's Department
- A local administration officer like the area chief, assistant chief or village elder
- A representative of the implementing partner, PS Kenya.

The forum participants were mobilized through the assistance of the CHVs and the CHEWs and the local administration would assist in calling the sessions to order and creating emphasis on the key messages and practices.

The forums were conducted in Kamba, the local dialect, and it provided an opportunity for the participants to share experiences, encourage each other, give feedback and to address any issues with the cash transfers and the nutritional counselling.

**SMS distribution**

PSK disseminated SMS messages to NICHE beneficiaries in November 2017. The SMSs were designed by the national level to support the nutritional message recall and uptake of behaviours of interest. The SMSs provided key messages on iron and folic acid supplementation, exclusive breastfeeding, vitamin A supplementation, complementary feeding/dietary diversification and ORS and zinc to treat diarrhoea and WASH practices.

[4] Information on nutritional counselling based on documentation from PSK.

These were sent to all the households in the intervention arm in both the January and the October cohorts.

# ANNEX 2. ETHICAL APPROVAL LETTERS FROM AMREF

amref health africa

Amref Health Africa in Kenya

**REF: AMREF – ESRC P294/2016**

28th November 2016

Helen Guyatt
Kimetrica Limited, Kenya
Tel: +25420201815
E-mail: helen.guyatt@kimetrica.com

Dear Dr. Guyatt,

**RESEARCH PROTOCOL: OUTCOMES AND IMPACT OF NUTRITIONAL IMPROVEMENTS THROUGH CASH AND HEALTH EDUCATION (NICHE) PROGRAMME ON THE FIRST 1,000 DAYS OF LIFE IN KITUI COUNTY, KENYA**

Thank you for submitting your research protocol to the Amref Ethics and Scientific Review Committee (ESRC).

This is to inform you that the ESRC has approved your protocol. The approval period is from 28th November 2016 to 28th November 2017 and is subject to compliance with the following requirements:

a) Only approved documents (informed consents, study instruments, advertising materials etc) will be used.

b) All changes (amendments, deviations, violations etc) are submitted for review and approval by Amref ESRC before implementation.

c) Death and life threatening problems and severe adverse events (SAEs) or unexpected adverse events whether related or unrelated to the study must be reported to the ESRC immediately.

d) Any changes, anticipated or otherwise that may increase the risks or affect safety or welfare of study participants and others or affect the integrity of the research must be reported to Amref ESRC immediately.

e) Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period (attach a comprehensive progress report to support the renewal).

f) Clearance for export of biological specimen or any form of data must be obtained from Amref ESRC, NACOSTI and Ministry of Health for each batch of shipment/export.

g) Submission of an executive summary report within 90 days upon completion of the study. This information will form part of the data base that will be consulted in future when processing related research studies so as to minimize chances of study duplication and/or plagiarism.

Please do not hesitate to contact the ESRC Secretariat (esrc.kenya@amref.org) for any clarification or query.

Yours sincerely,

pp

Prof. Mohamed Karama
Chair, Amref ESRC

AMREF - ESRC
28 NOV 2016
P.O. Box 30125 - 00100, NAIROBI

**CC:** Dr. George Kimathi, WASH Programme Manager, Amref Kenya and Vice Chair Amref ESRC
Samuel Muhula, Monitoring & Evaluation and Research Manager, Amref Kenya

**REF: AMREF – ESRC P294/2016**

December 6, 2017

Guyatt Helen,
Kimetrica Limited,
P.O Box 1327 Village Market 00621,
Tel. No +254202018156
Email: helen gyuyatt@kimetrica.com

Dear Dr. Guyatt,

**RESEARCH PROTOCOL: RESEARCHING THE OUTCOME AND IMPACT OF THE NUTRITIONAL IMPROVEMENT THROUGH CASH AND HEALTH EDUCATION (NICHE) PROGRAMME ON THE FIRST 1000 DAYS OF LIFE IN KITUI COUNTY, KENYA**

Thank you for submitting your protocol to the Amref Ethics and Scientific Review Committee (ESRC).

This is to inform you that the ESRC has approved annual renewal your protocol. The approval period is from December 6, 2017 to December 5, 2018 and is subject to compliance with the following requirements:

a) Only approved documents (informed consents, study instruments, advertising materials etc.) will be used.
b) All changes (amendments, deviations, violations etc.) are submitted for review and approval by Amref ESRC before implementation.
c) Death and life threatening problems and severe adverse events (SAEs) or unexpected adverse events whether related or unrelated to the study must be reported to the ESRC immediately.
d) Any changes, anticipated or otherwise that may increase the risks or affect safety or welfare of study participants and others or affect the integrity of the research must be reported to Amref ESRC immediately.
e) Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period (attach a comprehensive progress report to support the renewal).
f) Clearance for export of biological specimen or any form of data must be obtained from Amref ESRC, NACOSTI and Ministry of Health for each batch of shipment/export.
g) Submission of an executive summary report within 90 days upon completion of the study. This information will form part of the data base that will be consulted in future when processing related research studies so as to minimize chances of study duplication and/or plagiarism.

Please do not hesitate to contact the ESRC Secretariat (esrc.kenya@amref.org) for any clarification or query.

Yours sincerely,

AMREF - ESRC P.O. Box 30125 - 00100 NAIROBI

Prof. Mohamed Karama
Chair, Amref ESRC

CC: Dr. George Kindness, Director Institute of Capacity Development, Amref Health Africa and Vice Chair, Amref ESRC
Samuel Muhula, Monitoring & Evaluation and Research Manager, Amref Kenya

# ANNEX 3. CONSENT FORM

This annex contains the consent form used during the study in English and Swahili.

## Informed Consent Form

**[This ICF should only be used for those who have attained the age of majority, 18 years]**

| | |
|---|---|
| **Study Title** | Researching the Outcome and Impact of the Nutritional Improvements through Cash and Health Education (NICHE) Programme on the First 1,000 Days of Life in Kitui and part of Machakos County, Kenya |
| **Investigator(s)** | Kimetrica Limited |
| **Study Sponsor(s)** | UNICEF Kenya |
| **Collaborators** | Population Services Kenya |

This Informed Consent Form has two parts:

- Information Sheet (to share information about the study with you)
- Certificate of Consent (for signatures if you choose to participate)

You will be given a copy of the full Informed Consent Form.

### PART I: INFORMATION SHEET

Kimetrica is an independent research organization that has been contracted by UNICEF Kenya to undertake a household survey in Kitui County, Kenya. The survey aims at identifying the nutritional impact that cash transfers along with health education have on children below 24 months. The study will begin with a baseline survey, it will then have midline surveys and an endline, though you may not be asked to participate in all of these.

**Why is this Project Important?**

The purpose of this research is to evaluate the effects of additional cash transfers and nutritional counselling on any changes to the nutritional status of infant and young children.

**Who Can Participate?**

You are being invited to take part in this research project because:

1. You belong to a household that is currently receiving cash transfers from the Cash Transfer for Orphans and Vulnerable Children programme; and
2. You have experience in caring for a child who is under 24 months and/or you are pregnant.

**Participation is Your Choice**

Your participation in this research is completely voluntary. You will make the choice about whether you will participate or not. If you choose not to take part, you will continue to receive all of the services that you usually get in your community and nothing will change.

**What Is Involved in this Project?**

This is how this study will be conducted and what it will involve:

- The research will involve five rounds of surveys that will be undertaken to collect data on the household, the children under two years, the caregiver of the children and pregnant women where applicable. You may only be asked to participate in this survey.

- With your consent, the enumerator will carry out four tests:
  1. He/she will place their thumbs on the top of the feet of the children for about three seconds to test for oedema;
  2. They will measure the circumference of the child/children's, pregnant women's and carer's arm;
  3. They will measure the weight of the children using a weighing scale;
  4. They will measure the length/height of the children using a length board.

- After the first survey, each beneficiary household will be randomly selected to receive a certain combination of services (the regular cash transfers or additional cash transfers and nutritional counselling). These services will be provided for the purpose of the research for a limited period of time, after which all research participants will go back to receiving the standard cash transfer.

- The enumerator will carry out the tests mentioned above every time they visit the household for the children in the study, the carer and pregnant women if applicable. The entire study will last one year from when the first survey begins.

- If any changes are made to the study or new information becomes available, you will be informed by the enumerator during the visits to your house.

- The enumerator will be filling in your responses to a questionnaire and this will take between one and a half and two hours. The questionnaire used for the first visit has nine sections that will collect information on the children, the caregiver, any pregnant women and general questions about the household. The follow up visits will have 11 sections with the additional sections collecting information on nutritional counselling and any changes in the household setup. As a survey participant, you have a choice to not answer any questions or to withdraw at any time. If you feel uncomfortable about any of the questions asked you can mention this to the enumerator.

**How Long will the Project Last?**

This study will take place over a period of one year.

**What are the Risks?**

There is a risk that you may share some personal or confidential information by chance, or that you may feel uncomfortable talking about some of the topics in this study. However, we do not wish for this to happen. You do not have to answer any question or take part in the survey if you feel the question(s) are too personal or if talking about them makes you uncomfortable.

**What are the Benefits?**

Your participation will help us find out more about the effects that cash transfers, additional cash transfers and nutritional counselling have on the nutritional status of children. This information will be used to help decision-makers in Kenya to come up with solutions for improving the welfare of you and your community.

**How will we Protect your Information and Confidentiality?**

The research being done in the community may draw attention and if you participate you may be asked questions by other people in the community. We will not be sharing information about you to anyone outside of the research team. The information that we collect from this research project will be kept private. Any information about you will have a unique number on it instead of your name. Only the researchers will know what your number is and this information will not be distributed.

**What will Happen with the Results?**

This information will be used by UNICEF and the Government of Kenya to improve the cash transfer and health and nutrition interventions that are carried out in Kenya. Once the research is complete, the results will be published and will be accessible to the public on the Kimetrica and UNICEF websites.

**Can I Refuse to Participate or Withdraw from the Study?**

You do not have to take part in this research if you do not wish to do so. If you choose not to participate, you will continue to receive all of the normal services that you are currently receiving, and nothing will change. If you wish to stop participating in the study after you begin, you can stop at any time by telling someone on our project team. If you choose to stop taking part, you will continue to get the regular cash transfer that you were receiving before this research began and all other services that you usually get in your community.

**Who Can I Contact?**

If you have any questions, you can ask anyone from our team now or later. If you have questions later, you may contact Dr Helen Guyatt, Head of Research Kimetrica Limited, email: operations@kimetrica.com, phone number: +254.20.201.8156. If you have questions about your rights as a research participant, you may contact: The Research Officer, AMREF Kenya, Wilson Airport, Langata Road, Office Tel: +254 20 6994000, Fax: +254 20 606340, P.O Box 30125-00100, Nairobi, Kenya.

**Do you have any questions at this time?**

## PART II: CERTIFICATE OF CONSENT

I have read the above information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study.

Note: this Informed Consent Form should be read by (or read to) all persons to be interviewed, including the main respondent, main caregiver, and pregnant women (if any). Caregivers providing information about children under 2 years of age should also include the child's or children's names for which information is provided, and their relationship to them (i.e. caregiver or mother) under the field "role".

| Full Name of Participant | Role (main respondent, caregiver, pregnant woman) and if responding for a child, include the child's name and relationship to him/her | Signature of Participant | DD/MM/YYYY |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

*If visually impaired, physically impaired, mentally impaired or illiterate*

I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

| Full Name of Participant | Role (main respondent, caregiver, pregnant woman) and if responding for a child, include the child's name and relationship to him/her | Thumbprint of Participant | Signature of Witness (A literate witness must sign and should be selected by the participant and MUST have no connection to the research team.) | DD/MM/YYYY |
|---|---|---|---|---|
| | | | | |
| | | | | |

**Statement by the researcher/person taking consent**

I have accurately read out the information sheet to the potential participant, and to the best of my ability made sure that the participant understands that the following will be done:

1. A member of the research team will visit him/her once every 4 months, or if only participating in the baseline survey only once;
2. At the visit the participant will complete a 1.5 - 2 hour questionnaire;
3. The participant's information will be kept confidential.

I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

A copy of this consent form has been provided to the participant.

| Full name of Enumerator | Signature of Enumerator | DD/MM/YYYY |
|---|---|---|
| | | |

# Fomu ya Ridhaa

[Fomu hii ya ridhaa inastahili kutumika kwa wale waliohitimu umri wa miaka 18 au zaidi]

| | |
|---|---|
| **Kichwa cha Utafiti** | Utafiti wa kubaini matokeo na athari ya uboreshaji wa lishe kupitia pesa na elimu ya afya siku elfu moja (1,000) za kwanza za maisha katika kata ya Kitui na kata ndogo za Kaya ya Machakos, Kenya |
| **Watafiti** | Kimetrica Limited |
| **Wafadhili** | UNICEF Kenya |
| **Washirika** | Population Services Kenya |

Hii fomu ya ridhaa ina sehemu mbili:

- Nakala ya maelezo (ya kukujulisha kuhusu utafiti huu)
- Cheti cha ridhaa(ya kutia sahihi iwapo utakubali kushiriki kwenye utafiti huu).

Tutakuachia nakala ya ridhaa hii.

## SEHEMU I: FOMU YA MAELEZO

Kimetrica ni kampuni ya kibinafsi ya utafiti iliyopewa kandarasi na UNICEF Kenya kufanya utafiti wa kaya kwa kata hii ya Kitui, Kenya. Lengo la utafitii huu ni kutambua faida/athari za afya inayosababishwa na msaada wa pesa na elimu ya afya kwa watoto walio na umri chini ya miezi ishirini na nne (24). Tutaanza na utafiti wa msingi, kisha baadaye utafiti wa kati (midline) na wa mwisho(endline), ingawa unaweza kosa kuulizwa kushiriki katika zote haya.

**Umuhimu wa utafiti huu**

Madhumuni ya utafiti huu ni kutathmini faida au madhara ya ongezeko la msaada wa pesa na ushauri nasaha wa lishe juu ya mabadiliko yoyote ya hali ya lishe ya watoto wachanga na watoto wadogo.

**Wanao weza kushiriki**

Umealikwa kushiriki katika utafiti huu kwa sababu:

1. Wewe ni wa kaya inayopokea msaada kutoka kwa msaada wa fedha kwa ajili ya mayatima na watoto wanaoishi katika mazingira hatarishi; na
2. Una ujuzi wa kutunza mtoto ambaye yuko chini ya miezi 24 au wewe ni mjamzito

**Utashiriki kwa hiari yako**

Kushiriki kwako ni kwa hiari yako. Unaweza kuchagua kushiriki au kutokushiriki. Ukiamua kutoshiriki, utaendelea kupokea huduma zote unazopokea kijijini na hakuna lolote litakalobadilika.

**Utafiti huu utahusisha yafuatayo**

Hivi ndivyo utafiti huu utakavyofanyika na kile kitakachohusika:

- Utafiti huu utafanywa kwa raundi tano ya kukusanya takwimu juu ya kaya, watoto chini ya miaka miwili, mlezi wa watoto na wanawake wajawazito. Huenda ukakosa kushiriki katika tafiti zote nne na kushiriki tu katika mahojiano haya ya kwanza.

- Kwa idhini yako, mhoji atafanya vipimo nne:

    1. Atawekelea vidole vyake vya gumba juu ya miguu ya watoto kwa takrimu sekunde tatu ili kupima edema;
    2. Watapima mduara wa mkono wa mtoto/watoto, wanawake wajawazito na walezi;
    3. Watapima uzito wa watoto kutumia mzani ya uzito;
    4. Watapima urefu wa mtoto kwa kutumia bodi la kupima urefu;

- Baadaya ya utafiti wa kwanza, kila kaya mfadhiliwa iliolengwa itachaguliwa kwa kutofuata mpangilio wowote kupokea michanganyiko ya huduma (msaada wa kawaida wa fedha au msaada wa ziada wa fedha na ushauri nasaha wa lishe). Hudumu hizi zitatolewa kwa ajili ya utafiti huu kwa muda, baadaye washiriki wote wa utafiti wataendelea kupokea msaada wa fedha kama awali.
- Kila wakati mhoji atakapo tembelea kaya, atafanya vipimo vilivyotajwa hapo awali kwa watoto, walezi na wanawake wajawazito.
- Iwapo kutakuwa na mabadiliko kwenye utafiti au maelezo mapya kupatikana, utajulishwa na mhoji atakapokutembelea nyumbani.
- Mhoji atajaza majibu yako kwenye fomu ya maswali na utachukua muda kati ya saa moja na nusu au masaa mawili. Fomu ya maswali itakayo tumika mara ya kwanza ina sehemu tisa, inayokusanya maelezo kuhusu watoto, mlezi, wanawake wowote wajawazito na maswali ya kijumla kuhusu kaya. Utatembelewa tena na mhoji na fomu ya maswali itakayo kuwa na sehemu kumi na moja (11). Sehemu za ziada zitakusanya maelezo kuhusu ushauri nasaha wa lishe na mabadiliko yoyote kwenye kaya. Kama mshiriki wa utafiti, unaweza kuchagua kuruka maswali yoyote ambayo hutaki kuyajibu au kusimamisha mahojiano wakati wowote. Iwapo utajisikia na wasiwasi kutokana na maswali utakayo ulizwa unaweza mjulisha mhoji.

**Utafiti utaendelea kwa muda gani?**
Utafiti huu utachukua muda wa mwaka moja

**Hatari za Utafiti**
Kuna uwezekano wa kusema/kutaja jambo lolote la siri bila kukusudia au litakalokutia wasiwasi kuliongelea katika utafiti huu. Hata hivyo, hatungependalea haya kutendeka/kufanyika. Unaweza chagua kuruka swali lolote ambalo hutaki kulijibu ikiwa unahisi ni la siri  au kuyaongelea inakutia wasiwasi.

**Faida ya Utafiti**
Kushiriki kwako kutatuwezesha kujua zaidi kuhusu faida au athari ya msaada wa kifedha, msaada wa ziada wa kifedha na ushauri nasaha wa lishe kwa hali ya lishe ya watoto. Matokeo ya utafiti huu itatumiwa kusaidia wanaofanya uamuzi nchini Kenya kutafuta suluhu kwa minajili ya kuboresha ustawi wako na wa jamii yako.

**Jinsi tutakavyolinda maelezo na usiri wako**
Kushiriki kwako kwa utafiti waweza kuvutia  watu wa jamii na wanaweza kukuuliza maswali. Hatutafichua jambo lolote linaloweza kukutambulisha. Majibu yako yatakuwa ni siri kabisa. Maelezo yoyote utakayo tupa juu yako itakuwa na nambari ya kipekee badala ya jina lako. Watafiti tu ndio watakao jua nambari yako ya kipekee na maelezo yako hayatatolewa kwa mtu mwingine.

**Kitakachofanyikia matokeo ya utafiti**
Matokeo ya utafiti yatatumiwa na UNICEF na serikali ya Kenya kuboresha mradi wa msaada wa kifedha na afya na lishe zinazofanywa hapa Kenya. Baada ya utafiti, matokeo itachapishwa kwenye tovuti za Kimetrica na UNICEF ili iweze kupatikana kwa urahisi na kusomwa na uma.

**Je, naweza kukataa au kuacha kushiriki kwenye utafiti huu?**
Kushiriki kwako ni kwa hiari yako. Unaweza kuchagua kushiriki au kutokushiriki. Ukiamua kutoshiriki, utaendelea kupokea huduma zote unazopokea na hakuna yoyote itakayo badilika. Kama mshiriki wa utafiti, unaweza kuchagua kuruka maswali yoyote ambayo hutaki kuyajibu au kusimamisha mahojiano wakati wowote. Ukiamua kutoendelea kushiriki kwa utafiti huu, utaendelea kupokea msaada wa kawaida na huduma zote ulizokuwa ukipokea kabla ya utafiti huu kuanza.

**Ni nani naweza kuwasiliana naye**?
Endapo una maswali yoyote kuhusu huu utafiti au mahojiano haya, au wasiwasi au malalamishi, tunakukaribisha uwasiliane na Dr. Helen Guyatt, Mkuu wa Utafiti, Kimetrica Limited, barua pepe: operations@kimetrica.com, nambari ya simu: +254.20.201.8156.
Endapo utakuwa na maswali kuhusu haki zako kama mshiriki wa utafiti, waweza wasiliana na Afisa wa Utafiti, AMREF Kenya, Wilson Airport, Langata Road, Nambari ya simu:  +254 20 6994000 faksi: +254 20 606340, Sanduku la Posta 30125-00100, Nairobi, Kenya.

**Je, una swali lolote kuhusu utafiti huu kwa sasa?**

## SEHEMU II: CHETI CHA RIDHAA

Nimesoma/nimesomewa maelezo yote. Nimepata fursa ya kuuliza maswali kuhusu utafiti huu na kujibiwa kwa kikamilifu. Nimekubali kwa hiari yangu kuwa mshiriki kwenye utafiti huu.

Kumbuka: Hii fomu ya ridhaa inafaa kusomwa au kusomewa washiriki wote wa utafiti ikiwemo mhojiwa mkuu, mlezi mkuu na wanawake wajawazito. Walezi wanaohojiwa kuhusu watoto walio chini ya umri wa miaka miwili wanafaa kuandikisha jina/majina ya mtoto au watoto wote watakao husika na ushusiano wao kwa walezi hawa. (kama vile mlezi au mama) kwenye nafasi “jukumu”.

| Jina kamili la mshiriki | Jukumu (Mshiriki mkuu, Mlezi, mwanamke mjamzito) na iwapo unajibu mawali kwa niaba ya motto/watoto, tafadhali andikisha jina lake na uhusiano wako kwake | Sahihi ya Mshiriki | Tarehe |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Ikiwa mshiriki au mhojiwa ana ulemavu wa kuona, wa kimwili, wa kiakili au hajui kusoma na kuandika

Nimeshuhudia kusomewa fomu ya ridhaa kwa usahihi kwa mshiriki, na ameweza kuuliza maswali. Nimethibitisha kuwa mshiriki amepeana ridhaa kwa hiari yake.

| Jina kamili la mshiriki | Jukumu(Mshiriki mkuu, Mlezi, mwanamke mjamzito) na iwapo unajibu mawali kwa niaba ya motto/watoto, tafadhali andikisha jina lake na uhusiano wako kwake | Alama ya kidole cha gumba cha mshiriki | Sahihi ya shahidi ( Mshahidi anayeweza kusoma na kuandika anafaa kuweka sahihi. Anafaa kuchaguliwa na mshiriki na hapaswi kuwa na uhusiano wowote na mhoji) | Tarehe |
|---|---|---|---|---|
| | | | | |
| | | | | |

**Kauli ya mtafiti/mhoji**

Nimesoma kwa usahii maelezo yote ya hii fomu kwa mshiriki, na kwa kadri ya uwezo wangu, nimehakikisha kwamba mshiriki ameelewa kuwa:

1. Mhoji/Mtafiti wa utafiti huu atamtembelea mara moja kila baada ya miezi 4, au iwapo atashiriki kwa utafiti wa msingi tu, atatembelewa mara moja;
2. Kila ziara itachukua takriban masaa moja na nusu au masaa mawili kujibu maswali ya utafiti;
3. Majibu ya mshiriki yatakuwa ni ya siri kabisa.

Nathibitisha kuwa mshiriki alipewa fursa ya kuuliza swali lolote kuhusu utafiti huu, na kujibiwa kwa usahihi kwa kadri ya uwezo wangu. Nathibitisha pia mhojiwa hajalazimishwa kukubali ridhaa bali amekubali kwa hiari yake.

Nakala ya fomu hii ya ridhaa imekabidhiwa mshiriki.

| Jina kamili la Mhoji | Sahihi ya Mhoji | Tarehe |
|---|---|---|
| | | |

# ANNEX 4. HOUSEHOLD QUESTIONNAIRE (BASELINE) AND CHANGES MADE IN THE SUBSEQUENT SURVEYS

This annex contains the baseline questionnaire and all the additions to the questionnaire as the study progressed. Apart from the changes indicated in the second section of this annex, the questionnaire remained the same throughout the study.

## NICHE BASELINE QUESTIONNAIRE

**ALL ANSWERS SHOULD BE IN CAPITAL LETTERS**

### Section 1: Household (HH) Details

**Note to enumerator: Request to speak to the main caregiver if they are available**

| | | | |
|---|---|---|---|
| 101. Name of Interviewer *(text)* | | 102. Date of interview *(dd/mm/yy)* | |
| 103. Sub County *(text)* | | 104. Location *(text)* | |
| 105. Sub-location *(text)* | | 106. Village name *(text)* | |
| 107. Unique HH ID *(numeric)*<br>*Note to enumerator: This is in the enumerator assignment sheet.* | | 108. GPS Coordinates longitude and latitude.<br><br>*Note for Enumerator: If using the GPS Unit, copy everything as it appears.*<br>*Example:*<br>*N -1.36700*<br>*E 38.01060* | |
| 109. Has the consent form been completed?<br>*(1=yes and 0=no)* | | 110. Name of Head of household (HoH) *(text)* | |

| | | | |
|---|---|---|---|
| 111. Name of respondent.<br>*(Note to enumerator: Request to speak to the main caregiver in the household if they are available. If they are not available and cannot be located, then request to speak to the person that knows the child best in the household.)* | | 112. Telephone number of respondent (or head of household or another member of HH if respondent doesn't have one) ***(A 9-digit number e.g. 700000000)*** | |
| 113. Sex of respondent<br>*(1=male and 2=female)* | | 114. Age of respondent<br>*(completed years; If more than 99, put 99)* | |
| 115. Religion of Respondent<br>*(1=Christian; 2=Jehovah Witness; 3=Muslim; 4=Hindu; 5=Pagan; 6=Kavonokya; 7=Other(specify); 998=Don't know)* | | 116. Language of interview<br>*(1=English, 2=Kiswahili, 3=Kamba)* | |
| 117. How many members are there in this household? *(numeric)*<br>*Note to Enumerator: Inform the respondent that the HH members are people that usually live and eat together.* | | 118. How many pregnant women are there in this household? *(numeric)*<br><br>118b. How many can be interviewed today? *(numeric)* | |
| 119. Are you the main caregiver of children in this household? *(1=yes and 0=no)*<br><br>119b. **If no to Q119,** why is the main caregiver not being interviewed? *(1=not present, 2=not willing, 3=other(specify))* | _____<br>If yes, go to Q123.<br>If no, go to Q119b. | 120. Name of main caregiver (*text)* | |
| 121. Age of main caregiver *(completed years; If more than 99, put 99)* | | 122. Sex of main caregiver. *(1=male and 2=female)* | |
| 123. How many children in this household are currently aged between 0 and 24 months (including 24 months)? *(numeric)*<br><br>123b. Do these children under 2 have the same main caregiver or are cared for primarily by different people? *(1= the same, 2=different)* | _____ | 124. Name of **CT-OVC Beneficiary** *(text)*<br>*Note to Enumerator: One who receives the cash transfer, not the child.*<br><br>124b. Is this the same as the respondent? *(1=yes and 0=no)* | |

| | | | |
|---|---|---|---|
| 123c. If the main caregivers are different, how many caregivers are available to provide information on these children currently aged between 0 and 24 months? *(numeric)* | If 1=same, go to Q124.<br>If 2=different, go to Q123c. | | |
| 125. National ID number **of the CT-OVC beneficiary** *(numeric)*<br>*Note for enumerator: Ask to see and confirm name from the enumerator assignment sheet.* | | 126. CT-OVC Beneficiary number. *(numeric)* | |
| 127. Telephone number of the CT-OVC Beneficiary (or head of household or another member of HH if beneficiary doesn't have one) ***(A 9-digit number e.g. 700000000)*** *(numeric)* | | 128. Name of child that the CT-OVC cash transfer is meant for.<br><br>128b. How old is this child? *(completed years;*<br>*1=if less than 1 year)*<br><br>128c. Age in months if the child is aged 0-24 months (including 24 months). *(numeric)* | <br><br>_____<br>If age is greater than 2 years, go to Q129.<br>If age is equal to or less than 2 years, go to Q128c. |
| 129. When did the household member who is a beneficiary of CT-OVC start receiving the cash transfers? *(mm/yy)*<br><br>*Note to Enumerator:*<br>*1. If don't know (01/01/2000);*<br>*2. If they remember just the year (01/01/yyyy). Where yyyy=the year they remember*<br>*3. If they do not remember the day but remember the year and month (01/mm/yyyy). Where yyyy=the year they remember; mm=the month they remember.* | __ __/__ __ | 130. How is the cash transfer received? *(1=Bank, 2=Mpesa, 3=Other(specify)* | _____<br>If 1=Bank, go to Q131.<br>If 2=MPESA, go to Q132. |

| | | | |
|---|---|---|---|
| 131. Name of Bank. *(text)* | Go to Q133 | 132. Telephone number the cash transfer is sent to. ***(A 9-digit number e.g. 700000000)*** *(numeric)* | Go to Q133 |
| 133. Is this household a beneficiary of the WFP Cash for Assets (CFA) scheme? *(1=yes and 0=no)* | | 134. Is this household a beneficiary of the Health Insurance Subsidy Programme (HISP)? *(1=yes and 0=no)* | |
| 135. Is this household part of any other scheme that provides financial support, education or any other form of aid? *(1=yes and 0=no)*<br><br>135b. If **yes to Q135**, name of scheme? *(text)* | ⌊_____⌋<br>If yes, go to Q135b.<br>If no, go to Section 2: Household Roster | | |

## Section 2: Household Roster

| | **201. Name** *(Start with Head of Household)* | **202. Age** *(completed years) If less than 1 year put age as 0. If more than 99, put age as 99.* | **202b. If age is equal to or below 2 years, what is the age in months?** *(numeric)* | **203. Sex** *(1= male, 2= female)* | **204. Relation to Head of Household** *(refer to code a)* | **205. Is this household member pregnant (Female and age is 10+)?** *(1 = yes, 0 = no)* | **206. Is this household member a main caregiver /mother of a child aged up to and including 24 months?** *(1 = yes, 0 = no)* | **207. Marital Status (ages 10+)** *(refer to code b)* | **208. Completed education level** *(1= primary, 2=secondary, 3=tertiary, 4= none)* | **209. Main activity** ***For HH members above 2 years.*** *(1=attends school, 2= employed, 3= caregiver, 4= other (specify))* | **210. Does this household member suffer from a chronic disease such as asthma or AIDS?** *(1 = yes, 0 = no)* | **210b. If yes to Q210, which chronic disease?** *(refer to code c) (multiple selection allowed)* | **211. Is this household member disabled?** *(1 = yes, 0 = no) (Note to enumerator: Disability refers to hearing, vision, movement and mental impediments)* | **212. Was this household member present in the household in the last 7 days?** *(1 = yes, 0 = no)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | | | | | | | | | | | | | | |
| **2** | | | | | | | | | | | | | | |
| **3** | | | | | | | | | | | | | | |
| **4** | | | | | | | | | | | | | | |
| **5** | | | | | | | | | | | | | | |
| **6** | | | | | | | | | | | | | | |
| **7** | | | | | | | | | | | | | | |
| **8** | | | | | | | | | | | | | | |
| **9** | | | | | | | | | | | | | | |
| **10** | | | | | | | | | | | | | | |
| **11** | | | | | | | | | | | | | | |
| **12** | | | | | | | | | | | | | | |
| **13** | | | | | | | | | | | | | | |

**CODE**

***a)*** ***Relation to Head of Household code:*** *1=Head; 2=Wife or husband; 3=Son or daughter; 4=Son-in-law or daughter-in-law; 5=Grandchild; 6=Parent; 7=Parent-in-law; 8=Brother or sister; 9=Other relative; 10=Adopted/foster/stepchild; 11=Not related; 998=Don't know)*

***b)*** ***Marital Status code:*** *1= Married, single spouse; 2= Married, more than one spouse, 3= Single, 4= Widowed, 5= Separated, 6= Divorced, 998= Don't know*

***c)*** ***Chronic Disease code:*** *1=HIV/AIDS; 2=Diabetes; 3=Cancer; 4=Heart Disease; 5=Arthritis; 6=Allergic disease e.g. Asthma; 7= Other (specify)*

***d)*** **Main Activity of Household Member:** *1=Attends school; 2=Employed; 11=Teacher; 12=Farmer; 13=Fishing; 14=Livestock Rearing; 15=Business; 16= Petty Trade; 17=Skilled Labour; 18=Unskilled labour; 19=Unemployed; 20=Housewife; 21=Aged and stays at home; 22=A baby; 4=Other(Specify)*

## Section 3: Children and Caregivers

Repeat for all children aged between 0 and 24 months (including 24 months) in the Household Roster and **request to speak to their main caregiver or mother. If the main caregiver is not available, speak to the person that knows the child best in the household.**

| **Child and Parent/Caregiver Details** | **Child 1** | **Child 2** | **Child 3** |
|---|---|---|---|
| 301. Name of the child. | | | |
| 302. Respondent's full name.<br>*Note to enumerator: Ask to speak to main caregiver or mother* | | | |
| 303. What is your relationship to [insert child's name]?<br>*(1=mother, 2= caregiver, 3= father, 4=brother or sister, 5=cousin, 6= aunt or uncle, 7=grandparent, 8=other(specify))* | | | |
| 303b. How long have you been caring for [Insert child's name]? *(months)* | | | |
| 304. [Insert child's name] date of birth (*dd/mm/yyyy)* | | | |
| 304b. How was the date of birth calculated?<br>*(1=by consulting records; 2= recall/using a calendar of events, 3= other (specify))* | | | |
| 305. What is the name of [insert child's name]'s father? *(text)* | | | |
| 305b. Does he live in this household and his details collected in the household roster? *(1=yes, 0=no, 2=passed away)* | _____<br>If yes, go to Q306<br>If 2=passed away, go to Q306<br>if no, go to Q305c. | _____<br>If yes, go to Q306<br>If 2=passed away, go to Q306<br>if no, go to Q305c. | _____<br>If yes, go to Q306<br>If 2=passed away, go to Q306<br>if no, go to Q305c. |
| 305c. **If no to Q305b**, age of the father *(completed years)* | | | |
| 305d. **If no to Q305b**, father's educational level<br>*(1= primary, 2=secondary, 3=tertiary, 4= none)* | | | |
| 305e. **If no to Q305b**, how often does [insert child's name] interact with the father?<br>*(1= daily, 2= weekly, 3= bi-weekly, 4= monthly, 5= every three months, 6= every six months, 7= yearly, 8= never)* | | | |
| 305f. **If no to Q305b**, does he give you any money to help in the care of [insert child's name]? *(1=yes and 0=no)* | _____<br>If yes, go to Q305g,<br>if no, go to Q306. | _____<br>If yes, go to Q305g,<br>if no, go to Q306. | _____<br>If yes, go to Q305g,<br>if no, go to Q306. |
| 305g. **If yes to Q305f**, how much monetary support does he provide for [insert child's name] on a monthly basis?<br>*(Ksh, 998= don't know)* | | | |

| | | | |
|---|---|---|---|
| 306. How many children aged up to and including 2 years (24 months) in this household do you take care of? *(numeric)* | | | |
| 306b. How many children aged between 2 and 18 years in the household do you take care of? *(numeric)* | | | |
| **Child Measurements** | **Child 1** | **Child 2** | **Child 3** |
| 307. [Insert child's name] MUAC<br>*(cm to one decimal point; 997= If the respondent refused; 888=not completed for other reason)* | .☐☐☐ | .☐☐☐ | .☐☐☐ |
| 308. [Insert child's name] Weight *(kg to two decimal points; 997= If the respondent refused; 888=not completed for other reason)* | .☐☐☐☐ | .☐☐☐☐ | .☐☐☐☐ |
| 309. [Insert child's name] Length / Height<br>*(cm to two decimal points; 997= If the respondent refused; 888=not completed for other reason)* | .☐☐☐☐ | .☐☐☐☐ | .☐☐☐☐ |
| 310. Test child for Oedema *(1=yes, 0=no; 997= If the respondent refused; 888=not completed for other reason)*<br>*Note for enumerator: test for oedema on the child* | | | |

| **Child General Health** | **Child 1** | **Child 2** | **Child 3** |
|---|---|---|---|
| 311. [Insert child's name] Birth weight *(kg to two decimal points; 998=don't know)* | .☐☐☐☐ | .☐☐☐☐ | .☐☐☐☐ |
| 311b. How was this confirmed? *(1=by consulting records; 2= recall/using a calendar of events, 3= other (specify))* | | | |
| 312. Has [insert child's name] had their haemoglobin measured in the last **6 months**? *(1=yes and 0=no)*<br>*Note for enumerators: If the child is younger than 6 months, ask how many times since birth.* | ☐<br>If yes, go to Q312b<br>if no, go to Q313. | ☐<br>If yes, go to Q312b<br>if no, go to Q313. | ☐<br>If yes, go to Q312b<br>if no, go to Q313. |
| 312b. **If yes to Q312**, what was the value? *(to one decimal point)* | .☐☐☐ | .☐☐☐ | .☐☐☐ |
| 312c. How was this confirmed? *(1=by consulting records; 2= recall/using a calendar of event, 3= other (specify))* | | | |
| 313. Does [insert child's name] suffer from any chronic diseases, such as asthma or AIDS? *(1=yes and 0=no)* | ☐<br>If yes, go to Q313b,<br>if no, go to Q314. | ☐<br>If yes, go to Q313b,<br>if no, go to Q314. | ☐<br>If yes, go to Q313b,<br>if no, go to Q314. |

| | | | |
|---|---|---|---|
| 313b. **If yes to Q313**, which one? *(multiple selection allowed) (1=HIV/AIDS; 2=Diabetes; 3=Cancer; 4=Heart Disease; 5=Arthritis; 6=Allergic disease e.g. Asthma; 7= Other(Specify))* | | | |
| 313c. Does the child take any medication for this? *(1=yes and 0=no)* | | | |
| 314. How many times has [insert child's name] been taken for a **routine medical check-up** at a health facility in the last **6 months**? *(numeric)* *Note for enumerators: If the child is younger than 6 months, ask how many times since birth.* | | | |
| 315. How many times has [insert child's name] been taken for to a health facility due to **illness** in the last **6 months**? *(numeric)* *Note for enumerators: Ask how many times since birth if the child is younger than 6 months.* | | | |
| 316. Does anyone else look after [insert child's name] for periods of **more than an hour** a day on a regular basis? *(1=yes and 0=no)* | ____ If yes, go to Q316b, if no, go to Q317. | ____ If yes, go to Q316b, if no, go to Q317. | ____ If yes, go to Q316b, if no, go to Q317. |
| 316b. **If yes to Q316**, what is their relationship to [insert child's name]? *(1=mother, 2= caregiver, 3= father, 4=brother or sister, 5=cousin, 6= aunt or uncle, 7=grandparent, 8=other(specify))* | | | |
| 316c. **If yes to Q316**, is this person a member of this household and have had their information collected in the household roster? *(1=yes and 0=no)* | ____ If yes, go to Q316d, if no, go to Q317. | ____ If yes, go to Q316d, if no, go to Q317. | ____ If yes, go to Q316d, if no, go to Q317. |
| 316d. **If yes to Q316c, (i**f this person is a household member), write their full name. *(text)* | | | |
| 317. Has [insert child's name] shown symptoms of diarrhoea in the **last 2 weeks (14 days)** (i.e. watery stools at **least three times** in a period of **24 hours**)? *(1=yes and 0=no)* | ____ If yes, go to Q317b, if no, go to Q317d. | ____ If yes, go to Q317b, if no, go to Q317d. | ____ If yes, go to Q317b, if no, go to Q317d. |
| 317b. **If yes to Q317**, has [insert child's name] recovered? *(1=yes and 0=no)* | | | |
| 317c. **If yes to Q317,** was he/she given any of the following to drink at any time since he/she started having diarrhoea? *(multiple selection allowed) (1= oral rehydration salts (ORS) and zinc, 2= ORS liquid, 3= homemade fluid, 4= other (specify))* | | | |
| 317d. In the past **6 months**, how many times has [insert child's name] shown symptoms of diarrhoea? *(numeric)* | | | |

____ ____

| | | | |
|---|---|---|---|
| 318. Has [insert child's name] had a combination of a cough, fever and fast breathing in the **last 2 weeks (14 days)**? *(1=yes and 0=no)* | If yes, go to Q318b, if no, go to Q318d. | If yes, go to Q318b, if no, go to Q318d. | If yes, go to Q318b, if no, go to Q318d. |
| 318b. **If yes to Q318**, has [insert child's name] recovered? *(1=yes and 0=no)* | | | |
| 318c. **If yes to Q318**, was [insert child's name] treated with medicine? *(1=yes and 0=no)* | | | |
| 318d. In the **past 6 months**, how many times has [insert child's name] had a combination of a cough, fever and fast breathing? *(numeric)* | | | |
| 319. Has [insert child's name] had malaria in the last **2 weeks (14 days)**? *(1=yes and 0=no)* | If yes, go to Q319b, if no, go to Q319e. | If yes, go to Q319b, if no, go to Q319e. | If yes, go to Q319b, if no, go to Q319e. |
| 319b. **If yes to Q319,** was this confirmed at a medical facility? *(1=yes and 0=no)* | | | |
| 319c. **If yes to Q319,** has [insert child's name] recovered? *(1=yes and 0=no)* | | | |
| 319d. **If yes to Q319,** was the malaria treated with medicine? *(1=yes and 0=no)* | | | |
| 319e. In the **past 6 months**, how many times has [insert child's name] had malaria? *(numeric)* | | | |
| 320. Has [insert child's name] had a fever in the **last 2 weeks (14 days)**? *(1=yes and 0=no)* | If yes, go to Q320b, if no, go to Q320d. | If yes, go to Q320b, if no, go to Q320d. | If yes, go to Q320b, if no, go to Q320d. |
| 320b. **If yes to Q320,** has [insert child's name] recovered? *(1=yes and 0=no)* | | | |
| 320c. **If yes to Q320,** was [insert child's name] treated with medicine? *(1=yes and 0=no)* | | | |
| 320d. In the **past 6 months**, how many times has [insert child's name] had fever? *(numeric)* | | | |
| 321. Does [insert child's name] use diapers? *(1=yes and 0=no)* | If yes, go to Q321b, if no, go to Q322. | If yes, go to Q321b, if no, go to Q322. | If yes, go to Q321b, if no, go to Q322. |
| 321b. **If yes to Q321,** how much do you spend on them **each month (30 days)?** *(numeric)* | | | |
| 322. Do you purchase vitamins or supplements for [insert child's name], for example fish oil? *(1=yes and 0=no)* | If yes, go to Q322b, if no, go to Q323. | If yes, go to Q322b, if no, go to Q323 | If yes, go to Q322b, if no, go to Q323 |
| 322b. **If yes to Q322**, how much do you spend on them **each month (30 days)**? *(numeric)* | | | |

| Child vaccinations | Child 1 | Child 2 | Child 3 |
|---|---|---|---|
| 323. Does [insert child's name] have an immunization card (Mother and Child Health Booklet)? *(1=yes and 0=no)*<br>*Note for enumerators: ask to see it and if they have one, fill in the questions that follow as you refer to the card and ask the mother to clarify where you are not sure.* | ⌊___⌋<br>If yes, go to Q324,<br>if no, go to Q323b. | ⌊___⌋<br>If yes, go to Q324,<br>if no, go to Q323b. | ⌊___⌋<br>If yes, go to Q324,<br>if no, go to Q323b. |
| 323b. **If no to Q323**, are the child's vaccinations recorded somewhere? *(1=yes and 0=no)* | | | |
| 324. Has [insert child's name] ever received any vaccination drops in the mouth for polio? *(1=yes and 0=no)*<br>*Note to enumerator: Inform the caregiver that at times this vaccine is given during door to door campaigns* | ⌊___⌋<br>If yes, go to Q324b,<br>if no, go to Q325. | ⌊___⌋<br>If yes, go to Q324b,<br>if no, go to Q325. | ⌊___⌋<br>If yes, go to Q324b,<br>if no, go to Q325. |
| 324b. **If yes to Q324,** was the first polio vaccine received in the first two weeks after birth? *(1=yes and 0=no)* | | | |
| 324c. **If yes to Q324**, how was this confirmed?<br>*(1=by consulting records; 2= recall/using a calendar of event, 3= other (specify))* | | | |
| 324d. **If yes to Q324**, how many times did [insert child's name] receive the polio vaccine? *(numeric)*<br>*Note to enumerator: Inform the caregiver that at times this vaccine is given during door to door campaigns* | | | |
| 325. Has [insert child's name] ever received a BCG vaccination against tuberculosis – that is, an injection in the arm or shoulder that usually causes a scar?<br>*(1=yes and 0=no*) | ⌊___⌋<br>If yes, go to Q325b,<br>if no, go to Q326. | ⌊___⌋<br>If yes, go to Q325b,<br>if no, go to Q326. | ⌊___⌋<br>If yes, go to Q325b,<br>if no, go to Q326. |
| 325b. **If yes to Q325**, how was this confirmed?<br>*(1=by consulting records; 2= recall/using a calendar of event, 3= other (specify))* | | | |
| 326. Has [insert child's name] received a Hepatitis B Vaccination which is injected into the thigh muscle? *(1=yes and 0=no)* | ⌊___⌋<br>If yes, go to Q326b,<br>if no, go to Q327. | ⌊___⌋<br>If yes, go to Q326b,<br>if no, go to Q327. | ⌊___⌋<br>If yes, go to Q326b,<br>if no, go to Q327. |
| 326b. **If yes to Q326**, how was this confirmed?<br>*(1=by consulting records; 2= recall/using a calendar of event, 3= other (specify))* | | | |
| 327. Has [insert child's name] ever received a DPT vaccination – that is, an injection in the right thigh to prevent him/her from getting tetanus, whooping cough, and diphtheria?<br>*Probe by indicating that DPT vaccination is sometimes given at the same time as Polio. (1=yes and 0=no)* | ⌊___⌋<br>If yes, go to Q327b,<br>if no, go to Q328. | ⌊___⌋<br>If yes, go to Q327b,<br>if no, go to Q328. | ⌊___⌋<br>If yes, go to Q327b,<br>if no, go to Q328. |
| 327b. **If yes to Q327**, how was this confirmed?<br>*(1=by consulting records; 2= recall/using a calendar of event, 3= other (specify))* | | | |

| | | | |
|---|---|---|---|
| 327c. **If yes to Q327**, how many times did [insert child's name] receive the DPT vaccine? *(numeric)* | | | |
| 328. Has [insert child's name] ever received a pneumococcal vaccination – that is, an injection in the left thigh to prevent him/her from getting pneumonia? *Probe by indicating that pneumococcal vaccination is sometimes given at the same time as Polio*. *(1=yes and 0=no)* | ⌊____⌋<br>If yes, go to Q328b,<br>if no, go to Q329. | ⌊____⌋<br>If yes, go to Q328b,<br>if no, go to Q329. | ⌊____⌋<br>If yes, go to Q328b,<br>if no, go to Q329. |
| 328b. **If yes to Q328,** how was this confirmed? *(1=by consulting records; 2= recall/using a calendar of event, 3= other (specify))* | | | |
| 328c. **If yes to Q328,** how many times did [insert child's name] receive the pneumococcal vaccine? *(numeric)* | | | |
| 329. Has [insert child's name] received Vitamin A (administered at **6 months**)? *(1=yes and 0=no)* *Note to enumerator: Inform the caregiver that at times this is given during door to door campaigns* | ⌊____⌋<br>If yes, go to Q329b,<br>if no, go to Q330. | ⌊____⌋<br>If yes, go to Q329b,<br>if no, go to Q330. | ⌊____⌋<br>If yes, go to Q329b,<br>if no, go to Q330. |
| 329b. **If yes to Q329**, how was this confirmed? *(1=by consulting records; 2= recall/using a calendar of event, 3= other (specify))* | | | |
| 330. Has [insert child's name] received the rotavirus vaccine? *Note to enumerator: Inform the caregiver that vaccines are oral (taken by mouth and swallowed)* (*1=yes and 0=no)* | ⌊____⌋<br>If yes, go to Q330b,<br>if no, go to Q331. | ⌊____⌋<br>If yes, go to Q330b,<br>if no, go to Q331. | ⌊____⌋<br>If yes, go to Q330b,<br>if no, go to Q331. |
| 330b. **If yes to Q330**, how was this confirmed? *(1=by consulting records; 2= recall/using a calendar of event, 3= other (specify))* | | | |
| *331.* ***Note for enumerator: This vaccine is given to children who are above 6 months.*** Has [insert child's name] ever received a measles injection (or an MMR or MR) – that is, a shot in the arm at the age of 9 months or older - to prevent him/her from getting measles? *(1=yes, 0=no, 2=child is less than 6 months)* | ⌊____⌋<br>If yes, go to Q331b,<br>If 2=child is less than 6 months, go to Q331b,<br>if no, go to Q332. | ⌊____⌋<br>If yes, go to Q331b,<br>If 2=child is less than 6 months, go to Q331b,<br>if no, go to Q332. | ⌊____⌋<br>If yes, go to Q331b,<br>If 2=child is less than 6 months, go to Q331b,<br>if no, go to Q332. |
| 331b. **If yes to Q331,** how was this confirmed? *(1=by consulting records; 2= recall/using a calendar of event, 3= other (specify))* | | | |

| **Feeding practices** | **Child 1** | **Child 2** | **Child 3** |
|---|---|---|---|
| 332. Was the child breastfed at birth? *(1=yes, 0=no, 998=don't know)* | ⌊____⌋<br>If yes, go to Q332c,<br>if no, go to Q332b<br>if don't know, go to 333 | ⌊____⌋<br>If yes, go to Q332c,<br>if no, go to Q332b<br>if don't know, go to 333 | ⌊____⌋<br>If yes, go to Q332c,<br>if no, go to Q332b<br>if don't know, go to 333 |
| 332b. **If no to Q332**, why? *(1= no milk, 2= the child didn't like it, 3= the milk was not sufficient, 4= other (specify))* | ⌊____⌋<br>Go to Q333 | ⌊____⌋<br>Go to Q333 | ⌊____⌋<br>Go to Q333 |

| | | | |
|---|---|---|---|
| 332c. How long after birth was [insert child's name] first put to the breast? *(hours, 000=if immediately after birth; 1=if less than 1 hour)* | | | |
| 333. Has [insert child's name] consumed breast milk in the **last 7 days?** *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q333d, if no, go to Q333b. | ⌊_____⌋<br>If yes, go to Q333d, if no, go to Q333b. | ⌊_____⌋<br>If yes, go to Q333d, if no, go to Q333b. |
| 333b**. If no to Q333,** why? *(1= no milk, 2= the child doesn't like it, 3= the milk is not sufficient, 4= they have been weaned 4= other (specify))* | ⌊_____⌋<br>Go to Q333c. | ⌊_____⌋<br>Go to Q333c. | ⌊_____⌋<br>Go to Q333c. |
| 333c. Has the child ever consumed breast milk? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to 333d, if no, go to Q335. | ⌊_____⌋<br>If yes, go to 333d, if no, go to Q335. | ⌊_____⌋<br>If yes, go to 333d, if no, go to Q335. |
| 333d. **If yes to Q333**, how many times was [insert child's name] breastfed **in the last 24 hours** (include day and night)? *(numeric)* | | | |
| 334. Is [insert child's name**] only** fed breast milk (in other words takes no other milk or food source)? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes go to next part of section: Caregiver details Q349.<br>If no, go to Q335. | ⌊_____⌋<br>If yes go to next part of section: Caregiver details. Q349.<br>If no, go to Q335. | ⌊_____⌋<br>If yes go to next part o section: Caregiver details Q349.<br>If no, go to Q335. |
| 335. Is [insert child's name] fed infant formula? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q335b, if no, go to Q337. | ⌊_____⌋<br>If yes, go to Q335b, if no, go to Q337. | ⌊_____⌋<br>If yes, go to Q335b, if no, go to Q337. |
| 335b. **If yes to Q335**, how much do you spend on infant formula **each month (30 days)**? *(Ksh)* | | | |
| 336. **If yes to Q335**, how many times was [insert child's name] fed infant formula **in the last 24 hours** (include day and night)? *(numeric)* | | | |
| 337. Is [insert child's name] fed with alternative milk (any other milk that is not breast milk)? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q337b, if no, go to Q339. | ⌊_____⌋<br>If yes, go to Q337b, if no, go to Q339. | ⌊_____⌋<br>If yes, go to Q337b, if no, go to Q339. |
| 337b. **If yes to Q337**, which milk? *(multiple selection allowed) (1=cow milk, 2=goat milk, 3= Camel milk, 4= Powder milk 5=other (specify))* | | | |
| 338. How many times was [insert child's name] fed with alternative sources of milk in the **last 24 Hours** (include day and night)? *(numeric)* | | | |
| 339. Is [insert child's name] fed with a bottle? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q339b, | ⌊_____⌋<br>If yes, go to Q339b, if no, go to Q341. | ⌊_____⌋<br>If yes, go to Q339b, if no, go to Q341. |

| | | | |
|---|---|---|---|
| | if no, go to Q341. | | |
| 339b. **If yes to Q339**, do you sterilize the nipple? *(1=yes and 0=no)* | ⌊___⌋<br>If yes, go to Q339c, if no, go to Q340. | ⌊___⌋<br>If yes, go to Q339c, if no, go to Q340. | ⌊___⌋<br>If yes, go to Q339c, if no, go to Q340. |
| 339c. **If yes to Q339b,** how do you sterilize it? *(1=boiling water, 2=sterilizing tablets, 3=other(specify))* | | | |
| 340. How many times was [insert child's name] fed with a bottle in the **last 24 hours** (include day and night)? *(numeric)* | | | |
| 341. Is [insert child's name] fed any food (soft, semi-solid or solid) (excluding milk or formula)? *(1=yes and 0=no)* | ⌊___⌋<br>If yes, go to Q341b, if no go to next part of section: Caregiver details Q349. | ⌊___⌋<br>If yes, go to Q341b, if no go to next part of section: Caregiver details Q349. | ⌊___⌋<br>If yes, go to Q341b, if no go to next part o section: Caregiver details Q349. |
| 341b. **If yes to Q341,** at what age (months) did you start weaning [insert child's name] (giving them food)? *(number of months)* | | | |
| 342. Is [insert child's name] fed any commercial fortified baby food e.g. Cerelac or other iron-fortified baby food? *(1=yes and 0=no)* | ⌊___⌋<br>If yes, go to Q342b, if no, go to Q344. | ⌊___⌋<br>If yes, go to Q342b, if no, go to Q344. | ⌊___⌋<br>If yes, go to Q342b, if no, go to Q344. |
| 342b. **If yes to Q342**, how much do you spend on commercial fortified baby food **each month (30 days)**?*(Ksh)* | | | |
| 343. **H**ow many times was [insert child's name] fed solid, semi-solid or soft foods, including commercial fortified baby food in **the last 24 hours** (include day and night)? *(numeric)* | | | |

344. Please describe the foods or liquids (milk, semi-solid, solid or soft foods) that [insert child's name] ate or drank in **the last 24 hours** during the day and night. Start with the first food or drink of the morning.
***Note for enumerator:*** *Write down on your NOTE BOOK all foods and liquids mentioned. When composite dishes are mentioned, ask for the list of ingredients. When the respondent has finished, probe for meals and snacks not mentioned and check with the frequencies of milk and food above (milk, semi-solid, solid or soft foods).*

| **Child** | | | | | |
|---|---|---|---|---|---|
| Breakfast | Snack | Lunch | Snack | Dinner | Snack |
| | | | | | |

*345. When the respondent recall is complete, fill in the food groups on the **24-hour recall** based on the information recorded above. For any food groups not mentioned, ask the respondent if a food item from this group was consumed or if the child ate any food outside of the house Then ask the respondent **how many days in the past 7 days**, did the child consume each of the food items listed in the table.*

| Food Group | Examples | **Child 1** | | **Child 2** | | **Child 3** | |
|---|---|---|---|---|---|---|---|
| | | Consumed in the **PAST 24 HRS** *(1=yes and 0=no)* ***Note to enumerator: The information collected in Q344 is to be filled in this column ONLY.*** | In the **PAST 7 DAYS**, how many days did the child consume each food group? *(days)* ***Note to enumerator:*** *this item may have not been consumed in the last 24 hours* | Consumed in the **PAST 24 HRS** *(1=yes and 0=no)* ***Note to enumerator: The information collected in Q344 is to be filled in this column ONLY.*** | In the **PAST 7 DAYS**, how many days did the child consume each food group? *(days)* | Consumed in the **PAST 24 HRS** *(1=yes and 0=no)* ***Note to enumerator: The information collected in Q344 is to be filled in this column ONLY.*** | In the **PAST 7 DAYS**, how many days did the child consume each food group? *(days)* |
| Cereals (or foods made from these e.g. bread, noodles, porridge or other grain products, ugali) | Bread | | | | | | |
| | Noodles | | | | | | |
| | Ugali | | | | | | |
| | Porridge | | | | | | |
| | Millet | | | | | | |
| | Rice | | | | | | |
| | Wheat | | | | | | |
| | Sorghum | | | | | | |
| | Other grains | | | | | | |
| White roots and tubers | White potatoes (including irish) | | | | | | |
| | White yam | | | | | | |
| | White cassava | | | | | | |
| | Other foods made from roots | | | | | | |
| Vitamin A rich vegetables and tubers | Pumpkin | | | | | | |
| | Carrot | | | | | | |
| | Sweet potato | | | | | | |
| | Red sweet pepper | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Other vegetables that are orange inside | | | | | | |
| Dark green leafy vegetables | Cassava leaves | | | | | | |
| | Kale | | | | | | |
| | Spinach | | | | | | |
| | Other dark green leafy vegetables | | | | | | |
| Other vegetables | Tomato | | | | | | |
| | Onion | | | | | | |
| | Eggplant | | | | | | |
| | Cabbage | | | | | | |
| | Other vegetables | | | | | | |
| Vitamin A rich fruits | Mango | | | | | | |
| | Papaw | | | | | | |
| | Watermelon | | | | | | |
| | Other vitamin A rich fruits | | | | | | |
| Other fruits | Avocado | | | | | | |
| | Bananas | | | | | | |
| | Oranges | | | | | | |
| | Wild fruits | | | | | | |
| | Other fruits | | | | | | |
| | 100 percent fruit juice made from these | | | | | | |
| Organ meat | Liver | | | | | | |
| | Kidney | | | | | | |
| | Heart | | | | | | |
| | Matumbo | | | | | | |
| | Other organ meats | | | | | | |
| Flesh meats | Goat | | | | | | |
| | Beef | | | | | | |
| | Pork | | | | | | |
| | Sheep/Lamb | | | | | | |
| | Rabbit | | | | | | |
| | Chicken | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Duck | | | | | | |
| | Other birds or meat | | | | | | |
| Eggs | Chicken eggs | | | | | | |
| | Duck eggs | | | | | | |
| | Other eggs | | | | | | |
| Fish and seafood | Fresh fish | | | | | | |
| | Dried fish | | | | | | |
| Legumes, nuts and seeds | Dried beans | | | | | | |
| | Peas (Chickpeas, Cowpea, green peas) | | | | | | |
| | Lentils | | | | | | |
| | Nuts | | | | | | |
| | Seeds | | | | | | |
| Milk and milk products | Milk | | | | | | |
| | Yogurt | | | | | | |
| | Cheese | | | | | | |
| | Other milk products | | | | | | |
| Oils and fats | Oil | | | | | | |
| | Fats | | | | | | |
| | Butter | | | | | | |
| | Margarine (Blueband, Prestige etc.) | | | | | | |

| | **Child 1** | **Child 2** | **Child 3** |
|---|---|---|---|
| 346. Total number of meals **in the last 24 hours**. *(numeric) Note for enumerator: confirm total number makes sense with answers provided in Q333d, Q336, Q338, Q340, Q343 and Q344 as includes breastfed and other milk sources* | | | |
| 347. Were any meals missed in **the last 24 hours**? *(1=yes and 0=no)* | ⌊__⌋<br>If yes, go to Q347b, if no, go to Q348. | ⌊__⌋<br>If yes, go to Q347b, if no, go to Q348. | ⌊__⌋<br>If yes, go to Q347b, if no, go to Q348. |
| 347b. **If yes to Q347**, reason for missing meals **in the last 24 hours** (*1= lack of water/charcoal/firewood to cook, 2= lack of food, 3= child's lack of appetite, 4= other (specify))* | | | |

| | | | |
|---|---|---|---|
| 348. In the last **7 days**, has [insert child's name] missed any meals? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q348b, if no, go to Section 3: Caregiver | ⌊_____⌋<br>If yes, go to Q348b, if no, go to Section 3: Caregiver | ⌊_____⌋<br>If yes, go to Q348b, if no, go to Section 3 Caregiver |
| 348b. **If yes to Q348**, how many days in the last 7 days has [insert child's name] missed a meal? *(numeric)* | | | |

## Section 3: Caregiver of a child aged 0 to 24 months

**Note for enumerator: If the caregiver of the child is the same for all children, fill in just 1 column. If the caregivers are different, fill the respective columns depending on which child they care for.**

3.1 Is the caregiver the same for multiple children aged 0 to 24 months?
*(1=yes and 0=no)*

3.1b. If yes, for how many children aged 0 to 24 months?

3.1c. Has this respondent been interviewed as a caregiver?
*(1=yes and 0=no)*

If yes, skip to Section 4, If no, go to Q349

| **Caregiver Measurements** | **Caregiver of Child 1** | **Caregiver of Child 2** | **Caregiver of Child 3** |
|---|---|---|---|
| 349. Name of Caregiver *(text)* | | | |
| 349a. Sex of Caregiver | | | |
| 349b. MUAC of Caregiver<br>*(cm to one decimal point; 997= If the respondent refused; 888=not completed for other reason)* | ☐☐.☐ | ☐☐.☐ | ☐☐.☐ |
| 349ba. **If Q349** is not completed due to another reason (answer to Q349=888), what was the reason? (text) | | | |

| **Caregiver Information** | **Caregiver of Child 1** | **Caregiver of Child 2** | **Caregiver of Child 3** |
|---|---|---|---|
| 350. Do you take any vitamins or supplements for example fish oil? *(1=yes and 0=no)* | ☐<br>If yes, go to Q350b, if no, go to Q351. | ☐<br>If yes, go to Q350b, if no, go to Q351. | ☐<br>If yes, go to Q350b, if no, go to Q351. |
| 350b. **If yes to Q350**, please provide details. *(text)* | | | |
| 351. **On a scale of 1-5** how do you rate this household's food availability stress?<br>*(1= never worried about getting enough food,*<br>*2= rarely worried about getting enough food,*<br>*3= sometimes worried about getting enough food,*<br>*4= often worried about getting enough food,*<br>*5= always worried about how to get enough food)* | | | |

| | | | |
|---|---|---|---|
| 352. **On a scale of 1-5** how do you rate your own level of stress as a caregiver? *(1= never worried, 2= rarely worried, 3= sometimes worried, 4= often worried, 5= always worried)* | | | |
| 353. Do you worry about your future? *(1=yes and 0=no)* | | | |
| 354. **On a scale of 1-5,** how do you rate your level of happiness? *(1= never happy, 2= rarely happy, 3= sometimes happy, 4= often happy, 5= always happy)* | | | |
| 355. On average, how many hours do you spend looking after and caring for children **each day (24 hours)**? *(numeric)* | | | |
| 356. Do you feel this is sufficient time for you to address their health care and nutritional needs? *(1=yes and 0=no)* | | | |
| 357. On average**, how many hours per day** do you spend on house chores but not in CARE roles (e.g. cooking, fetching water and firewood, cleaning, etc.)? *(numeric)* | | | |
| 358. On average, **how many hours per day** do you spend on paid work? *(numeric)* | | | |
| 359. Do you feel you have sufficient resources (time, money etc.) to care for the children you care for? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q360, if no, go to Q359b. | ⌊_____⌋<br>If yes, go to Q360, if no, go to Q359b. | ⌊_____⌋<br>If yes, go to Q360, if no, go to Q359b. |
| 359b. **If no to Q359**, what is needed? *(multiple selection allowed) (1= more time, 2= more money for food and care, 3= medicines for the child, 4= other (specify))* | | | |

360. Please describe the foods and liquids that you ate or drank **in the last 24 hours** during the day and night. Start with the first food or drink of the morning.
*Note for enumerator: Write down all foods and liquids mentioned in your NOTE BOOK. When composite dishes are mentioned, ask for the list of ingredients. When the respondent has finished, probe for meals and snacks not mentioned.*

| **Caregiver** | | | | | |
|---|---|---|---|---|---|
| Breakfast | Snack | Lunch | Snack | Dinner | Snack |
| | | | | | |

*361. When the respondent recall is complete, fill in the food groups on the **24-hour recall** based on the information recorded above. For any food groups not mentioned, ask the respondent if a food item from this group was consumed or if the caregiver ate any food outside of the house. Then ask the respondent **how many days in the past 7 days**, did the caregiver consume each of the food items listed in the table.*

| Food Group | Examples | **Caregiver of Child 1** | | **Caregiver of Child 2** | | **Caregiver of Child 3** | |
|---|---|---|---|---|---|---|---|
| | | Consumed in the **PAST 24 HRS** *(1=yes and 0=no)* ***Note to enumerator: The information collected in Q360 is to be filled in this column ONLY.*** | In the **PAST 7 DAYS**, how many days did the caregiver consume each food group? *(days)* ***Note to enumerator:*** *this item may have not been consumed in the last 24 hours* | Consumed in the **PAST 24 HRS** *(1=yes and 0=no)* ***Note to enumerator: The information collected in Q360 is to be filled in this column ONLY.*** | In the **PAST 7 DAYS**, how many days did the caregiver consume each food group? *(days)* | Consumed in the **PAST 24 HRS** *(1=yes and 0=no)* ***Note to enumerator: The information collected in Q360 is to be filled in this column ONLY.*** | In the **PAST 7 DAYS**, how many days did the caregiver consume each food group? *(days)* |
| Cereals (or foods made from these e.g. bread, noodles, porridge or other grain products, ugali) | Bread | | | | | | |
| | Noodles | | | | | | |
| | Ugali | | | | | | |
| | Porridge | | | | | | |
| | Millet | | | | | | |
| | Rice | | | | | | |
| | Wheat | | | | | | |
| | Sorghum | | | | | | |
| | Other grains | | | | | | |
| White roots and tubers | White potatoes (including irish) | | | | | | |
| | White yam | | | | | | |
| | White cassava | | | | | | |
| | Other foods made from roots | | | | | | |
| Vitamin A rich vegetables and tubers | Pumpkin | | | | | | |
| | Carrot | | | | | | |
| | Sweet potato | | | | | | |
| | Red sweet pepper | | | | | | |
| | Other vegetables that are orange inside | | | | | | |
| Dark green leafy vegetables | Cassava leaves | | | | | | |
| | Kale | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Spinach | | | | | | |
| | Other dark green leafy vegetables | | | | | | |
| Other vegetables | Tomato | | | | | | |
| | Onion | | | | | | |
| | Eggplant | | | | | | |
| | Cabbage | | | | | | |
| | Other vegetables | | | | | | |
| Vitamin A rich fruits | Mango | | | | | | |
| | Papaw | | | | | | |
| | Watermelon | | | | | | |
| | Other vitamin A rich fruits | | | | | | |
| Other fruits | Avocado | | | | | | |
| | Bananas | | | | | | |
| | Oranges | | | | | | |
| | Wild fruits | | | | | | |
| | Other fruits | | | | | | |
| | 100 percent fruit juice made from these | | | | | | |
| Organ meat | Liver | | | | | | |
| | Kidney | | | | | | |
| | Heart | | | | | | |
| | Matumbo | | | | | | |
| | Other organ meats | | | | | | |
| Flesh meats | Goat | | | | | | |
| | Beef | | | | | | |
| | Pork | | | | | | |
| | Sheep/Lamb | | | | | | |
| | Rabbit | | | | | | |
| | Chicken | | | | | | |
| | Duck | | | | | | |
| | Other birds or meat | | | | | | |
| Eggs | Chicken eggs | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Duck eggs | | | | | | |
| | Other eggs | | | | | | |
| Fish and seafood | Fresh fish | | | | | | |
| | Dried fish | | | | | | |
| Legumes, nuts and seeds | Dried beans | | | | | | |
| | Peas (Chickpeas, Cowpea, green peas) | | | | | | |
| | Lentils | | | | | | |
| | Nut | | | | | | |
| | Seeds | | | | | | |
| Milk and milk products | Milk | | | | | | |
| | Yogurt | | | | | | |
| | Cheese | | | | | | |
| | Other milk products | | | | | | |
| *Oils* and fats | Oil | | | | | | |
| | Fat | | | | | | |
| | Butter | | | | | | |
| | Margarine (Blueband, Prestige etc) | | | | | | |
| Sweets | Sugar | | | | | | |
| | Honey | | | | | | |
| | Soda | | | | | | |
| | Sweetened juice drinks | | | | | | |
| | Cookies and cakes | | | | | | |
| Spices, condiments, beverages | Spices (black pepper, salt, others) | | | | | | |
| | Coffee/ tea | | | | | | |
| | Other drinks | | | | | | |

| | **Caregiver of Child 1** | **Caregiver of Child 2** | **Caregiver of Child 3** |
|---|---|---|---|
| 362. Total number of meals **in the last 24 hours**. *(numeric) Note for enumerator: confirm total number makes sense with answer provided in Q360.* | | | |

| | | | |
|---|---|---|---|
| 363. Were any meals missed **in the last 24 hours**? *(1=yes and 0=no)* | ⌊___⌋ If yes, go to Q363b, if no, go to Q364 | ⌊___⌋ If yes, go to Q363b, if no, go to Q364 | ⌊___⌋ If yes, go to Q363b, if no, go to Q364 |
| 363b. **If yes**, reason for missing meals **in the last 24 hours** (*1= lack of water/charcoal/firewood to cook, 2= lack of food, 3= lack of appetite, 4= other (specify))* | | | |
| 364. In the last **7 days**, have you missed any meals? (*1=yes and 0=no)* | ⌊___⌋ If yes, go to Q364b, if no, go to Q365 | ⌊___⌋ If yes, go to Q364b, if no, go to Q365 | ⌊___⌋ If yes, go to Q364b, if no, go to Q365 |
| 364b. **If yes to Q364**, how many days did you miss a meal? *(numeric)* | | | |
| **WASH Practices** | **Caregiver of Child 1** | **Caregiver of Child 2** | **Caregiver of Child 3** |
| 365. Do you wash your hands? *(1=yes and 0=no)* | ⌊___⌋ If yes, go to Q365b, if no, go to Q370. | ⌊___⌋ If yes, go to Q365b, If no, go to Q370. | ⌊___⌋ If yes, go to Q365b, if no, go to Q370. |
| 365b. **If yes to Q365,** what do you generally use to wash your hands? *(1=only water, 2=soap and water, 3=soap when I can afford it, 4= Traditional herb, 5=other (specify))* | | | |
| 366. **In the last 24 hours** in which instances did you wash your hands? (answer for each question 366a-366e) *(1=yes and 0=no)* | | | |
| 366a. After using the toilet | | | |
| 366b. Before cooking. | | | |
| 366c. Before eating | | | |
| 366d. After taking children to the toilet | | | |
| 366e. Other (specify | | | |
| 367. Do you wash your hands after changing the child's diapers/nappie? *(1=yes and 0=no)* | ⌊___⌋ If yes, go to Q367b, if no, go to Q368. | ⌊___⌋ If yes, go to Q367b, if no, go to Q368. | ⌊___⌋ If yes, go to Q367b, if no, go to Q368. |
| 367b. **If yes to Q367**, what do you use to wash your hands after changing the child's diaper? *(1=only water, 2=soap and water, 3=soap when I can afford it, 4= Traditional herb, 5=other (specify))* | | | |
| 368. Do you wash your hands before preparing food? *(1=yes and 0=no)* | ⌊___⌋ If yes, go to Q368b, if no, go to Q369. | ⌊___⌋ If yes, go to Q368b, if no, go to Q369. | ⌊___⌋ If yes, go to Q368b, if no, go to Q369. |
| 368b. **If yes to Q368,** what do you use to wash your hands before preparing food? | | | |

| | | | |
|---|---|---|---|
| *(1=only water, 2=soap and water, 3=soap when I can afford it, 4= Traditional herb, 5=other (specify)* | | | |
| 369. Do you wash your hands before feeding the child? *(1=yes and 0=no)* | ⌊_____⌋ If yes, go to Q369b, if no, go to Q370. | ⌊_____⌋ If yes, go to Q369b, if no, go to Q370. | ⌊_____⌋ If yes, go to Q369b, if no, go to Q370. |
| 369b. **If yes to Q369,** what do you use to wash your hands before feeding the child? *(1=only water, 2=soap and water, 3=soap when I can afford it, 4= Traditional herb, 5=other (specify)* | | | |
| 370. How is the disposal of children's faeces mainly done? *(1=Child used toilet/latrine, 2= Put/rinsed into toilet or latrine, 3= Put/rinsed into drain or ditch, 4=Thrown into garbage, 5=Buried, 6=Left in the o*pen, 7=Other (specify)) | | | |

| **Healthcare Access** | **Caregiver of Child 1** | **Caregiver of Child 2** | **Caregiver of Child 3** |
|---|---|---|---|
| 371. What is the nearest health facility? *(1= public hospital, 2= health centre, 3= private health facility, 4=dispensary, 5=clinic, 6= other (specify))* | | | |
| 371b. Where is this health facility? *Please give the village name (Text)* | | | |
| 371c. How far is this health facility? *(km to two decimal points)* | .☐☐ ☐☐ | .☐☐ ☐☐ | .☐☐ ☐☐ |
| 371d. What mode of transport do you use to reach this facility? *(1=walking, 2=motorbike/bodaboda, 3=matatu, 4=other(specify))* | | | |
| 371e. How much does it cost you for transport to reach this health facility? *(Ksh, 0 if walking)* | | | |
| 372. How often do you visit this facility? *(1= daily, 2= weekly, 3= bi-weekly, 4= monthly, 5= every three months, 6= every six months, 7= yearly, 8= never)* | ⌊_____⌋ If 8=never, go to Q374. | ⌊_____⌋ If 8=never, go to Q374. | ⌊_____⌋ If 8=never, go to Q374. |
| 373. What was the main purpose of your last visit to this health facility? *(1= routine medical check-up, 2= antenatal check-up, 3= illness, 4= other (specify)* | | | |
| 374. How many times have you visited ANY health facility (public hospital, health centre, private health facility, dispensary, clinic) in the **last 30 days**? *(numeric)* | | | |
| 374b. How many times have you visited ANY health facility in the **past 6 months**? *(numeric)* | | | |

| | | | |
|---|---|---|---|
| 375. In the **past three months**, have you received any **nutrition**-related information **on the RADIO?** E.g. On how best to feed yourself and your child? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q375b,<br>if no, go to Q376. | ⌊_____⌋<br>If yes, go to Q375b,<br>if no, go to Q376. | ⌊_____⌋<br>If yes, go to Q375b,<br>if no, go to Q376. |
| 375b. **If yes to Q375**, do you feel this information has been useful for you? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q375c,<br>if no, go to Q375d. | ⌊_____⌋<br>If yes, go to Q375c,<br>if no, go to Q375d. | ⌊_____⌋<br>If yes, go to Q375c,<br>if no, go to Q375d. |
| 375c. **If yes to Q375b**, what were the three most important things that you learned? *(text)* | 1)<br>2)<br>3)<br>Go to Q376. | 1)<br>2)<br>3)<br>Go to Q376. | 1)<br>2)<br>3)<br>Go to Q376. |
| 375d. **If no to Q375b**, why not? (*1=Knew it already; 2=did not understand what they were saying; 3= it was not relevant to me; 4=other(specify))* | | | |
| 376. In the **past three months**, have you received any **nutrition**-related information from **ANY other SOURCE** (i.e. not the radio) on how best to feed yourself and your child? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q376b,<br>if no, go to Q377. | ⌊_____⌋<br>If yes, go to Q376b,<br>if no, go to Q377. | ⌊_____⌋<br>If yes, go to Q376b,<br>if no, go to Q377. |
| 376b. **If yes to Q376**, where did you hear about it?<br>*(1= friends or family, 2= health facility, 3= Community Health Volunteer, 4= NGO (name), 5= other (specify))* | | | |
| 376c. **If yes to Q376,** do you feel this information has been useful for you? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q376d,<br>if no, go to Q376e | ⌊_____⌋<br>If yes, go to Q376d,<br>if no, go to Q376e | ⌊_____⌋<br>If yes, go to Q376d,<br>if no, go to Q376e |
| 376d. **If yes to Q376c**, what were the three most important things that you learned? *(text)* | 1)<br>2)<br>3)<br>Go to Q377. | 1)<br>2)<br>3)<br>Go to Q377. | 1)<br>2)<br>3)<br>Go to Q377. |

| | | | |
|---|---|---|---|
| 376e. **If no to Q376c**, why not? (*1=Knew it already; 2=did not understand what they were saying; 3= it was not relevant to me; 4=other(specify))* | | | |
| 377. In the **past three months**, have you received any **health**-related information **on the RADIO**? E.g. hand-washing, importance of vaccinations? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q377b,<br>if no, go to Q378. | ⌊_____⌋<br>If yes, go to Q377b,<br>if no, go to Q378. | ⌊_____⌋<br>If yes, go to Q377b,<br>if no, go to Q378. |
| 377b. **If yes to Q377**, do you feel this information has been useful for you? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q377c,<br>if no, go to Q377d. | ⌊_____⌋<br>If yes, go to Q377c,<br>if no, go to Q377d. | ⌊_____⌋<br>If yes, go to Q377c,<br>if no, go to Q377d. |
| 377c. **If yes to Q377b**, what were the three most important things that you learned? *(text)* | 1)<br>2)<br>3)<br>Go to Q378. | 1)<br>2)<br>3)<br>Go to Q378. | 1)<br>2)<br>3)<br>Go to Q378. |
| 377d. **If no to Q377b**, why not? (*1=Knew it already; 2=did not understand what they were saying; 3= it was not relevant to me; 4=other(specify))* | | | |
| 378. In the **past three months**, have you received any **health**-related information from **ANY other SOURCE** (i.e. not the radio)? E.g. hand-washing, importance of vaccinations? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q378b,<br>if no, go to Q379. | ⌊_____⌋<br>If yes, go to Q378b,<br>if no, go to Q379. | ⌊_____⌋<br>If yes, go to Q378b,<br>if no, go to Q379. |
| 378b. **If yes to Q378**, where did you hear about it?<br>*(1= friends or family, 2= health facility, 3= Community Health Volunteer, 4= NGO (name), 5= other (specify))* | | | |
| 378c**. If yes to Q378**, do you feel this information has been useful for you? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q378d,<br>if no, go to Q378e. | ⌊_____⌋<br>If yes, go to Q378d,<br>if no, go to Q378e. | ⌊_____⌋<br>If yes, go to Q378d,<br>if no, go to Q378e. |
| 378d. **If yes to Q378c**, what were the three most important things that you learned? *(text)* | 1)<br>2)<br>3)<br>Go to Q379. | 1)<br>2)<br>3)<br>Go to Q379. | 1)<br>2)<br>3)<br>Go to Q379. |

| | | | |
|---|---|---|---|
| 378e. **If no to Q378c**, why not? (*1=Knew it already; 2=did not understand what they were saying; 3= it was not relevant to me; 4=other(specify))* | | | |

| **Additional Information on Caregiver** | **Caregiver of Child 1** | **Caregiver of Child 2** | **Caregiver of Child 3** |
|---|---|---|---|
| 379. Religion of Caregiver. *(1=Christian; 2=Jehovah Witness; 3=Muslim; 4=Hindu; 5=Pagan; 6=Kavonokya; 7=Other; 998=Don't know)* | | | |
| 380. Is the main caregiver employed? *(1=yes and 0=no) (Note for enumerator: check with HH roster)* | ⌊___⌋ If yes, go to Q380b, if no, go to Q381 | ⌊___⌋ If yes, go o Q380b, if no, go to Q381 | ⌊___⌋ If yes, go o Q380b, if no, go to Q381 |
| 380b. **If yes to Q380,** how long have you been employed for? *(years; 1= if less than 1 year)* | | | |
| 380c. **If yes to Q380,** are you the main breadwinner in this household? *(1=yes and 0=no)* | | | |
| 380d. What is your monthly (30 days) income? *(Ksh)* | | | |

**Note to enumerator: Confirm that the numbers in the table below match the number in Q123 in Section 1**

| | |
|---|---|
| 381. Number of children up to and including 24 months whose information has been collected. (numeric) | |
| 382. Number of caregivers interviewed. (numeric) | |

Go to Section 4: Pregnant women.

## Section 4: Pregnant Women

**Note to enumerator**: Kindly request to interview all the pregnant women in the household including the caregivers who are pregnant**.**

| **Information on pregnancy and general health** | **Pregnant Woman 1** | **Pregnant Woman 2** | **Pregnant Woman 3** |
|---|---|---|---|
| 401. Name of Pregnant woman *(text)* | | | |
| 402. Have you had your haemoglobin measured in the last **6 months**? *(1=yes and 0=no)* | ⌊___⌋<br>If yes, go to Q402b, if no, go to Q403. | ⌊___⌋<br>If yes, go to Q402b, if no, go to Q403. | ⌊___⌋<br>If yes, go to Q402b, if no, go to Q403. |
| 402b. **If yes to Q401**, when was the last time you had your haemoglobin measured? *(1= more than one year ago, 2= less than 6 months ago)* | ⌊___⌋<br>If 2= less than 6 months ago, go to Q402c, if 1= more than one year ago, go to Q403. | ⌊___⌋<br>If 2= less than 6 months ago, go to Q402c, if 1= more than one year ago, go to Q403. | ⌊___⌋<br>If 2= less than 6 month ago, go to Q402c, if 1= more than one ye ago, go to Q403. |
| 402c. What was the value? *(to one decimal point)* | .□□ □ | .□□ □ | .□□ □ |
| 402d. How was this confirmed? *(1=by consulting records; 2= recall, 3= other (specify))* | | | |
| 403. In what trimester are you? *(1= first (1-3 months), 2= second (4-6 months), 3= third (7-9 months))* | | | |
| 403b. Weeks into pregnancy if known *(numeric, 998 = don't know)* | | | |
| 404. How many times have you visited a health facility for an antenatal care (ANC) visit? *(numeric)* | | | |
| 404b. How would you rate the assistance you received? *(1= good, 2= average, 3= poor)* | | | |
| 405. Where did you go for most of your visits? *(1= public hospital, 2= health centre, 3= private health facility, 4= dispensary, 5=clinic, 6= other (specify))* | | | |
| 406. Have you had any complications so far? *(1=yes and 0=no)* | ⌊___⌋<br>If yes, go to Q406b, if no, go to Q407. | ⌊___⌋<br>If yes, go to Q406b, if no, go to Q407. | ⌊___⌋<br>If yes, go to Q406b, if no, go to Q407. |
| 406b. **If yes to Q406**, please explain. ***(multiple selection allowed)*** *(1= Anemia, 2= Urinary Tract Infections, 3= Mental Health Conditions such as a low or sad mood; Loss of interest in fun activities; Changes in appetite, sleep, and* | | | |

| | | | |
|---|---|---|---|
| *energy; Problems thinking, concentrating, and making decisions; Feelings of worthlessness, shame, or guilt; Thoughts that life is not worth living. 4= Hypertension (High Blood Pressure); 5= Gestational Diabetes Mellitus (GDM); 6= Obesity and Weight Gain; 7= Infections; 8= Hyperemesis Gravidarum, 9=Other(Specify))* | | | |
| 407. Have you received any vaccinations since you got pregnant? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q407b,<br>if no, go to Q408. | ⌊_____⌋<br>If yes, go to Q407b,<br>if no, go to Q408. | ⌊_____⌋<br>If yes, go to Q407b,<br>if no, go to Q408. |
| 407b. **If yes to Q407**, which ones? *(1=Tetanus, diphtheria, acellular pertussis (Tdap); 2=Influenza (flu); 3=Hepatitis A; 4=Hepatitis B; 5=Poliomyelitis; 6=Pneumococcus; 7=other(specify))* | | | |
| 408. Do you take any vitamins or supplements such as fish oil or calcium? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q408b,<br>if no, go to Q409. | ⌊_____⌋<br>If yes, go to Q408b,<br>if no, go to Q409. | ⌊_____⌋<br>If yes, go to Q408b,<br>if no, go to Q409. |
| 408b. **If yes to Q408**, please provide details. *(text)* | | | |
| 409. Do you consume iron tablets or Iron-Folic Acid Supplementation (IFAS)? *(1=yes and 0=no)* | | | |
| 410. Have you taken any medication since the beginning of your pregnancy? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q410b,<br>if no, go to Q411. | ⌊_____⌋<br>If yes, go to Q410b,<br>if no, go to Q411. | ⌊_____⌋<br>If yes, go to Q410b,<br>if no, go to Q411. |
| 410b. **If yes to Q410**, please specify. *(text)* | | | |
| 411. Have you been doing any physically demanding work *(e.g.* carrying heavy loads, fetching water) during pregnancy? *(1=yes and 0=no)* | | | |
| 412. Do you engage or have you engaged in any of the following behaviours since discovering you were pregnant? (*multiple selection allowed)*<br>*(1= smoking, 2= drinking alcohol, 3= taking drugs or other illegal substances, 4= none of the above)* | | | |

| | | | |
|---|---|---|---|
| 413. What is the name of the father to the child you are expecting? *(text)* | | | |
| 413b. Does he live in this household and his details collected in the household roster? *(1=yes, 0=no, 2=passed away)* | ⌊_____⌋<br>If yes, go to Q414,<br>If 2=passed away, go to Q414,<br>if no, go to Q413c. | ⌊_____⌋<br>If yes, go to Q414,<br>If 2=passed away, go to Q414,<br>if no, go to Q413c. | ⌊_____⌋<br>If yes, go to Q414,<br>If 2=passed away, go to Q414,<br>if no, go to Q413c. |
| 413c. **If no to Q413b**, age of the father *(completed years)* | | | |
| 413d. **If no to Q413b**, Educational level<br>*(1= primary, 2=secondary, 3=tertiary, 4= none)* | | | |
| 413e. How often does the father visit you? *(1= daily, 2= weekly, 3= bi-weekly, 4= monthly, 5= every three months, 6= every six months, 7= yearly, 8= never)* | | | |
| 413f. Will he be providing you with any monetary support for your child? *(1=yes, 0=no, 998=don't know)* | | | |
| 414. Is this your first pregnancy? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q419,<br>if no, go to Q414b. | ⌊_____⌋<br>If yes, go to Q419,<br>if no, go to Q414b. | ⌊_____⌋<br>If yes, go to Q419,<br>if no, go to Q414b. |
| 414b. **If no to Q414**, how many other pregnancies that went to term (gave birth) did you have? *(numeric)* | | | |
| 415. **If no to Q414,** did you give birth prematurely in any of your previous pregnancies? *(1=yes and 0=no)* | | | |
| 416. **If no to Q414,** did you have any miscarriages?<br>*(1=yes and 0=no)* | | | |
| 417. **If no to Q414,** where did you deliver your last baby? *(1=home and 2= hospital)* | | | |
| 418. **If no to Q414,** was your last birth assisted by medical personnel? *(1=yes and 0=no)* | | | |
| 419. Do you feel you have sufficient resources (time and money) to care for the child once he/she is born? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q420,<br>if no, go to Q419b. | ⌊_____⌋<br>If yes, go to Q420,<br>if no, go to Q419b. | ⌊_____⌋<br>If yes, go to Q420,<br>if no, go to Q419b. |
| 419b. **If no to Q419**, what is needed? *(1= more time, 2= more money for food and care, 3= medicines for the child, 4= other (specify))* | | | |
| 420. Do you worry about the future? *(1=yes and 0=no)* | | | |
| 421. On a scale of 1-5, how do you rate your level of | | | |

| | | | |
|---|---|---|---|
| happiness? *(1= never happy, 2= rarely happy, 3= sometimes happy, 4= often happy, 5= always happy)* | | | |
| **Details on the Pregnant Woman** | **Pregnant Woman 1** | **Pregnant Woman 2** | **Pregnant Woman 2** |
| 422. Has the pregnant woman responding been interviewed as the caregiver in section 3? *(1=yes and 0=no)* | ⌊___⌋<br>If yes, go to Q440, if no, go to Q423. | ⌊___⌋<br>If yes, go to Q440, if no, go to Q423. | ⌊___⌋<br>If yes, go to Q440, if no, go to Q423. |
| 423.MUAC of pregnant woman<br>*(cm to one decimal point; 997= If the respondent refused; 888=not completed for other reason)* | .☐☐ ☐ | .☐☐ ☐ | .☐☐ ☐ |

*424. Please describe the foods and liquids that you ate or drank **in the last 24 hours** during the day and night. Start with the first food or drin of the morning.*
*Note for enumerator: Write down all foods and drinks mentioned in your NOTE BOOK. When composite dishes are mentioned, ask for the lis of ingredients. When the respondent has finished, probe for meals and snacks not mentioned.*

**Pregnant Woman**

| Breakfast | Snack | Lunch | Snack | Dinner | Snack |
|---|---|---|---|---|---|
| | | | | | |

*425. When the respondent recall is complete, fill in the food groups on the **24-hour recall** based on the information recorded above. For ar food groups not mentioned, ask the respondent if a food item from this group was consumed or if the pregnant woman ate any food outside the house. Then ask the respondent **how many days in the past 7 days**, did the pregnant woman consume each of the food items listed the table.*

| Food Group | Examples | **Pregnant Woman 1** | | **Pregnant Woman 2** | | **Pregnant Woman 3** | |
|---|---|---|---|---|---|---|---|
| | | Consumed in the **PAST 24 HRS** *(1=yes and 0=no)* ***Note to enumerator: The information collected in Q424 is to be filled in this column ONLY.*** | In the **PAST 7 DAYS**, how many days did the pregnant woman consume each food group? *(days)* ***Note to enumerator:*** *this item may have not been consumed in the last 24 hours* | Consumed in the **PAST 24 HRS** *(1=yes and 0=no)* ***Note to enumerator: The information collected in Q424 is to be filled in this column ONLY.*** | In the **PAST 7 DAYS**, how many days did the pregnant woman consume each food group? *(days)* ***Note to enumerator:*** *this item may have not been consumed in the last 24 hours* | Consumed in the **PAST 24 HRS** *(1=yes and 0=no)* ***Note to enumerator: The information collected in Q424 is to be filled in this column ONLY.*** | In the **PAST** DAYS, ho many days d the pregna woman consum each food group *(days)* ***Note enumerator:*** *th item may hav not bee consumed in th last 24 hours* |
| Cereals (or foods made from these e.g. bread, noodles, porridge or other grain products, ugali) | Bread | | | | | | |
| | Noodles | | | | | | |
| | Ugali | | | | | | |
| | Porridge | | | | | | |
| | Millet | | | | | | |
| | Rice | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Wheat | | | | | | |
| | Sorghum | | | | | | |
| | Other grains | | | | | | |
| White roots and tubers | White potatoes (including irish) | | | | | | |
| | White yam | | | | | | |
| | White cassava | | | | | | |
| | Other foods made from roots | | | | | | |
| Vitamin A rich vegetables and tubers | Pumpkin | | | | | | |
| | Carrot | | | | | | |
| | Sweet potato | | | | | | |
| | Red sweet pepper | | | | | | |
| | Other vegetables that are orange inside | | | | | | |
| Dark green leafy vegetables | Cassava leaves | | | | | | |
| | Kale | | | | | | |
| | Spinach | | | | | | |
| | Other dark green leafy vegetables | | | | | | |
| Other vegetables | Tomato | | | | | | |
| | Onion | | | | | | |
| | Eggplant | | | | | | |
| | Cabbage | | | | | | |
| | Other vegetables | | | | | | |
| Vitamin A rich fruits | Mango | | | | | | |
| | Papaw | | | | | | |
| | Watermelon | | | | | | |
| | Other vitamin A rich fruits | | | | | | |
| Other fruits | Avocado | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Bananas | | | | | | |
| | Oranges | | | | | | |
| | Wild fruits | | | | | | |
| | Other fruits | | | | | | |
| | 100 percent fruit juice made from these | | | | | | |
| Organ meat | Liver | | | | | | |
| | Kidney | | | | | | |
| | Heart | | | | | | |
| | Matumbo | | | | | | |
| | Other organ meats | | | | | | |
| Flesh meats | Goat | | | | | | |
| | Beef | | | | | | |
| | Pork | | | | | | |
| | Sheep/Lamb | | | | | | |
| | Rabbit | | | | | | |
| | Chicken | | | | | | |
| | Duck | | | | | | |
| | Other birds or meat | | | | | | |
| Eggs | Chicken eggs | | | | | | |
| | Duck eggs | | | | | | |
| | Other eggs | | | | | | |
| Fish and seafood | Fresh fish | | | | | | |
| | Dried fish | | | | | | |
| Legumes, nuts and seeds | Dried beans | | | | | | |
| | Peas (Chickpeas, Cowpea, green peas) | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Lentils | | | | | | |
| | Nut | | | | | | |
| | Seeds | | | | | | |
| Milk and milk products | Milk | | | | | | |
| | Yogurt | | | | | | |
| | Cheese | | | | | | |
| | Other milk products | | | | | | |
| Oils and fats | Oil | | | | | | |
| | Fats | | | | | | |
| | Butter | | | | | | |
| | Margarine (Blueband, Prestige etc.) | | | | | | |
| Sweets | Sugar | | | | | | |
| | Honey | | | | | | |
| | Soda | | | | | | |
| | Sweetened juice drinks | | | | | | |
| | Cookies and cakes | | | | | | |
| Spices, condiments, beverages | Spices (black pepper, salt, others) | | | | | | |
| | Coffee/ tea | | | | | | |
| | Other drinks | | | | | | |

| | **Pregnant Woman 1** | **Pregnant Woman 2** | **Pregnant Woman 3** |
|---|---|---|---|
| 426. Total number of meals **in the last 24 hours**. *(numeric) Note for enumerator: confirm total number makes sense with answers provided for Q424.* | | | |
| 427. Were any meals missed **in the last 24 hours**? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q427b, if no, go to Q428. | ⌊_____⌋<br>If yes, go to Q427b, if no, go to Q428. | ⌊_____⌋<br>If yes, go to Q427b, if no, go to Q428. |
| 427b. **If yes to Q427**, reason for missing meals **in the last 24 hours** (*1= lack of water/charcoal/firewood to cook, 2= lack of food, 3= lack of appetite, 4= other (specify))* | | | |

| | | | |
|---|---|---|---|
| 428. In the last **7 days**, have you missed any meals? (*1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q428b, if no, go to Q429 | ⌊_____⌋<br>If yes, go to Q428b, if no, go to Q429 | ⌊_____⌋<br>If yes, go to Q428b, if no, go to Q429 |
| 428b. **If yes to Q428**, how many days did you miss a meal? *(numeric)* | | | |
| **WASH Practices** | **Pregnant Woman 1** | **Pregnant Woman 2** | **Pregnant Woman 3** |
| 429. Do you wash your hands? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q429b, if no, go to Q432. | ⌊_____⌋<br>If yes, go to Q429b, if no, go to Q432. | ⌊_____⌋<br>If yes, go to Q429b, if no, go to Q432. |
| 429b. **If yes to Q429,** what do you generally use to wash your hands?<br>*(1=only water, 2=soap and water, 3=soap when I can afford it, 4= Traditional herb, 5=other (specify))* | | | |
| 430. **In the last 24 hours** in which instances did you wash your hands? (answer for each question 430a-430e)<br>*(1=yes and 0=no)* | | | |
| 430a. After using the toilet | | | |
| 430b. Before cooking. | | | |
| 430c. Before eating | | | |
| 430d. After taking children to the toilet | | | |
| 430e. Other (specify) | | | |
| 431. Do you wash your hands before preparing food? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q431b, if no, go to Q432. | ⌊_____⌋<br>If yes, go to Q431b, if no, go to Q432. | ⌊_____⌋<br>If yes, go to Q431b, if no, go to Q432. |
| 431b. **If yes to Q431,** what do you use to wash your hands before preparing food?<br>*(1=only water, 2=soap and water, 3=soap when I can afford it, 4= Traditional herb, 5=other (specify)* | | | |

| **Healthcare Access** | **Pregnant Woman 1** | **Pregnant Woman 2** | **Pregnant Woman 2** |
|---|---|---|---|
| 432. What is the nearest health facility?<br>*(1= public hospital, 2= health centre, 3= private health facility, 4=dispensary, 5=clinic, 6= other (specify))* | | | |
| 432b. Where is this health facility? *Please give the village name (Text)* | | | |

| | | | |
|---|---|---|---|
| 432c. How far is this health facility? *(km to two decimal points)* | .□□ □□ | .□□ □□ | .□□ □□ |
| 432d. What mode of transport do you use to reach this facility? *(1=walking, 2=motorbike/bodaboda, 3=matatu, 4=other(specify))* | | | |
| 432e. How much does it cost you for transport to reach this health facility? *(Ksh, 0 if walking)* | | | |
| 433. How often do you visit this facility? *(1= daily, 2= weekly, 3= bi-weekly, 4= monthly, 5= every three months, 6= every six months, 7= yearly, 8= never)* | ⌊___⌋<br>If never, go to Q435. | ⌊___⌋<br>If never, go to Q435. | ⌊___⌋<br>If never, go to Q435. |
| 434. What was the main purpose of your last visit to this health facility? *(1= routine medical check-up, 2= antenatal check-up, 3= illness, 4= other (specify)* | | | |
| 435. How many times have you visited ANY health facility (public hospital, health centre, private health facility, dispensary, clinic) in the **last 30 days**? *(numeric)* | | | |
| 435b. How many times have you visited ANY health facility in the **past 6 months**? *(numeric)* | | | |
| 436. In the **past three months**, have you received any **nutrition**-related information **on the RADIO?** E.g. On how best to feed yourself and the child you're expecting? *(1=yes and 0=no)* | ⌊___⌋<br>If yes, go to Q436b,<br>if no, go to Q437. | ⌊___⌋<br>If yes, go to Q436b,<br>if no, go to Q437. | ⌊___⌋<br>If yes, go to Q436b,<br>if no, go to Q437. |
| 436b. **If yes to Q436**, do you feel this information has been useful for you? *(1=yes and 0=no)* | ⌊___⌋<br>If yes, go to Q436c,<br>if no, go to Q436d. | ⌊___⌋<br>If yes, go to Q436c,<br>if no, go to Q436d. | ⌊___⌋<br>If yes, go to Q436c,<br>if no, go to Q436d. |
| 436c. **If yes to Q436**, what were the three most important things that you learned? *(text)* | 1)<br>2)<br>3)<br>Go to Q437. | 1)<br>2)<br>3)<br>Go to Q437. | 1)<br>2)<br>3)<br>Go to Q437. |

| | | | |
|---|---|---|---|
| 436d. **If no to Q436b**, why not? (*1=Knew it already; 2=did not understand what they were saying; 3= it was not relevant to me; 4=other(specify))* | | | |
| 437. In the **past three months**, have you received any **nutrition**-related information from **ANY other SOURCE** (i.e. not the radio) on how best to feed yourself and the child you're expecting? *(1=yes and 0=no)* | _____<br>If yes, go to Q437b,<br>if no, go to Q438. | _____<br>If yes, go to Q437b,<br>if no, go to Q438. | _____<br>If yes, go to Q437b,<br>if no, go to Q438. |
| 437b. **If yes to Q437**, where did you hear about it?<br>*(1= friends or family, 2= health facility, 3= Community Health Volunteer, 4= NGO (name), 5= other (specify))* | | | |
| 437c. **If yes to Q437,** do you feel this information has been useful for you? *(1=yes and 0=no)* | _____<br>If yes, go to Q437d,<br>if no, go to Q437e | _____<br>If yes, go to Q437d,<br>if no, go to Q437e | _____<br>If yes, go to Q437d,<br>if no, go to Q437e |
| 437d. If yes to Q437, what were the three most important things that you learned? *(text)* | 1)<br>2)<br>3)<br>Go to Q438. | 1)<br>2)<br>3)<br>Go to Q438. | 1)<br>2)<br>3)<br>Go to Q438. |
| 437e. **If no to Q437c**, why not? (*1=Knew it already; 2=did not understand what they were saying; 3= it was not relevant to me; 4=other(specify))* | | | |
| 438. In the **past three months**, have you received any **health**-related information **on the RADIO**? E.g. hand-washing, importance of vaccinations? *(1=yes and 0=no)* | _____<br>If yes, go to Q438b,<br>if no, go to Q439. | _____<br>If yes, go to Q438b,<br>if no, go to Q439. | _____<br>If yes, go to Q438b,<br>if no, go to Q439. |
| 438b. **If yes to Q438**, do you feel this information has been useful for you? *(1=yes and 0=no)* | _____<br>If yes, go to Q439c,<br>if no, go to Q439d. | _____<br>If yes, go to Q439c,<br>if no, go to Q439d. | _____<br>If yes, go to Q439c,<br>if no, go to Q439d. |
| 438c. **If yes to Q438b**, what were the three most important things that you learned? *(text)* | 1)<br>2) | 1)<br>2) | 1)<br>2) |

| | | | |
|---|---|---|---|
| | 3)<br><br>Go to Q439. | 3)<br><br>Go to Q439. | 3)<br><br>Go to Q439. |
| 438d. **If no to Q438b**, why not? (*1=Knew it already; 2=did not understand what they were saying; 3= it was not relevant to me; 4=other(specify))* | | | |
| 439. In the **past three months**, have you received any **health**-related information from **ANY other SOURCE** (i.e. not the radio)? E.g. hand-washing, importance of vaccinations? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go o Q439b,<br>if no, go to Q440 | ⌊_____⌋<br>If yes, go o Q439b,<br>if no, go to Q440 | ⌊_____⌋<br>If yes, go o Q439b,<br>if no, go to Q440 |
| 439b. **If yes to Q439**, where did you hear about it?<br>*(1= friends or family, 2= health facility, 3= Community Health Volunteer, 4= NGO (name), 5= other (specify))* | | | |
| 439c**. If yes to Q439**, do you feel this information has been useful for you? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q439d,<br>if no, go to Q439e. | ⌊_____⌋<br>If yes, go to Q439d,<br>if no, go to Q439e. | ⌊_____⌋<br>If yes, go to Q439d,<br>if no, go to Q439e. |
| 439d. **If yes to Q439c**, what were the three most important things that you learned? *(text)* | 1)<br><br>2)<br><br>3)<br><br>Go to Q440. | 1)<br><br>2)<br><br>3)<br><br>Go to Q440. | 1)<br><br>2)<br><br>3)<br><br>Go to Q440. |
| 439e. **If no to Q439c**, why not? (*1=Knew it already;*<br>*2=did not understand what they were saying;*<br>*3= it was not relevant to me; 4=other(specify))* | | | |

**Note to the Enumerator: Confirm this number is the same as the one given in Section 1: Q118b**

440. Number of pregnant women interviewed *(numeric)* ☐

Go to Section 5: Cash Transfers

**Note to the Enumerator:** Now go back to the main respondent to complete the rest of the survey (Sections 5-9) if there are no other pregnant women to be interviewed.

## Section 5: Cash Transfers

**Note to enumerator: Go back to the main respondent to complete the rest of the survey (Sections 5-9). If the HHs has never received a cash transfer, skip to section 6**

| | | | |
|---|---|---|---|
| 501. Are you (the respondent), the person who receives the CT-OVC cash transfer payments? *(1=yes and 0=no)*<br>*Note for enumerator: check with the response in section 1: Q124 and Q124b,* | ⌊_____⌋<br>If yes, go to Q502,<br>if no, go to Q501b. | 502. When did this household last receive a cash transfer? *(mm/yy)*<br><br>*Note to Enumerator:*<br>*1. If don't know (01/01/2000);*<br>*2. If they remember just the year (01/01/yyyy). Where yyyy=the year they remember*<br>*3. If they do not remember the day but remember the year and month (01/mm/yyyy). Where yyyy=the year they remember; mm=the month they remember.* | __ __/__ __ |
| | | 502b. How much was the cash transfer? *(Ksh)* | |
| 501b. **If no to Q501**, who receives the CT-OVC cash transfer?<br>*(Name of the household member)* | | 502c. What was this money spent on?<br>*Multiple selection allowed; (1= food;*<br>*2= health; 3= child needs; 4= non-food items (soap, clothes, books, etc.),*<br>*5= household assets, 6=school fees,*<br>*7=All of the above, 8=Other(specify))* | |
| | | 502d. Did you spend the entire cash transfer? *(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Q502f,<br>if no, go to Q502e. |
| | | 502e. **If no to Q502d**, how much is remaining? *(Ksh)* | Go to Q502f |
| | | 502f. **D**id you share this cash transfer with anyone else who is not a household member? *(1=yes and 0=no)* | |

| | | | |
|---|---|---|---|
| 503. When did this household receive the cash transfer before the one that has just been asked about? (*mm/yy)* | __ __/__ __ | 504. Do you (the respondent) contribute to the decisions on how the CT-OVC cash transfer is spent? *(1=yes and 0=no)* | |
| 503b. How much was this? *(Ksh)* | | 504b. How many household members contribute to the decision on how to spend the CT-OVC cash transfer? *(numeric)* | |
| 503c. What was this money spent on?<br>*Multiple selection allowed; (1= food;*<br>*2= health; 3= child needs; 4= non-food items (soap, clothes, books, etc.),*<br>*5= household assets, 6=school fees,*<br>*7=All of the above, 8=Other(specify))* | | 504c. What are their names? *(text)* | 1)<br>2)<br>3) |
| 504d. Is any of these household members that contribute to the decisions the CT-OVC beneficiary? *(1=yes and 0=no)* | | 505. Have you ever experienced delays in the disbursement of the cash transfers? *(1=yes and 0=no)* | _____<br>If yes, go to Q505b, if no, go to Q506. |
| 504e. Is there a final decision maker or is the decision always shared?<br>*(1=final decision maker, 2=shared)* | _____<br>If 1=final decision maker, go to Q504f,<br>if 2=shared, go to Q505. | 505b. **If yes to Q505**, what is the longest period you have had to wait for the cash transfer in months? *(numeric)* | |
| 504f. Name of the final decision maker? *(text)* | | 505c. How many times in the last 12 months did you experience delays? *(numeric)* | |
| 506. How would you rate the disbursement on a scale of 1-5?<br>*(1=not at all efficient,*<br>*2= slightly efficient, 3=somewhat efficient,*<br>*4= very efficient, 5= extremely efficient)* | | | |

## Section 6: Livelihoods and Income

| | | | |
|---|---|---|---|
| 601. What is the household's main livelihood activity? (*refer to livelihood code)* | | 602. What is the household's main source of income? *(refer to income code)* | |
| 603. How much total income did this household receive in the **last 30 days** (**excluding cash transfers**)? *(Ksh)* | | 604. Are there months where you have more money than others? *(1=yes and 0=no)* | ⌊_____⌋ If yes, go to Q604b, if no, go to Q605. |
| | | 604b. **If yes**, which months. *(multiple selection allowed) (refer to month code)* | |
| | | 604c. What is the source of this extra income? *(refer to income code)* | |
| 605. Does the household receive any external financial support (from family or friends)? *(1=yes and 0=no)* | ⌊_____⌋ If yes, go to Q605b, if no, go to Q606. | 606. How many household members generate income? *(numeric)* | |
| 605b. **If yes**, how much on average **per month (30 days)?** *(Ksh)* | | | |

| **Livelihood activity** | **CODE** | **Income source** | **CODE** | **Months** | **CODE** |
|---|---|---|---|---|---|
| Farmer | 1 | Crop sales | 1 | January | 1 |
| Fishing | 2 | Livestock sales | 2 | February | 2 |
| Livestock rearing | 3 | Fish sales | 3 | March | 3 |
| Business | 4 | Sale of milk/dairy/egg products | 4 | April | 4 |
| Teacher | 5 | Other animal products | 5 | May | 5 |
| Skilled labour | 6 | Skilled labour | 6 | June | 6 |
| Unskilled labour | 7 | Unskilled labour | 7 | July | 7 |
| Other (specify) | 8 | Sale of charcoal/firewood | 8 | August | 8 |
| | | Petty trade | 9 | September | 9 |
| | | Sale of wild foods | 10 | October | 10 |
| | | Receipt of remittances from relatives outside the village | 11 | November | 11 |
| | | Cash gifts (relative/friends/community) change code in digital | 12 | December | 12 |

| | | | | | |
|---|---|---|---|---|---|
| | | Cash relief (NGOs, organizations) | 13 | | |
| | | Other (specify) | 14 | | |

## Section 7: Social Economic status and wealth indicators

**Note to Enumerator**: **Q701b; Q702** and **Q702b** are for your **observation only do not ask.**

| | | | |
|---|---|---|---|
| 701. Do you have a place in the house for hand-washing? (1=yes and 0=no)<br>*Note for enumerator: ask to view the facility* | If yes, go to Q701b, if no, go to Q703. | *Observation only, do not ask.*<br>702. Is the hand washing facility close to the sanitation/toilet facilities? (1=yes and 0=no) | |
| *Observation only, do not ask.*<br>701b. If yes, is soap and water available? *(1=yes and 0=no)* | | 702b. Is this facility close to the food preparation area (within 2 metres)?<br>*(1=yes and 0=no)* | |
| 703. Do you have stagnant or sewage water near your house? (1=yes and 0=no) | If yes, go to Q703b, if no, go to Q704. | 704. What kind of toilet facility does this household have?<br>*Note to enumerators: Confirm this through observation*<br>*(1=Flush Toilet, 2=Pit Latrine, 3=Ventilated improved pit latrine (VIP), 4=Pit latrine with slab, 5=Pit latrine without slab/open pit, 6=Composting toilet, 7=Bucket, 8=Hanging toilet/hanging latrine, 9=No facilities or bush or field, 10=Other (specify))* | |
| 703b. How close is it in metres? *(estimated metres to 1 decimal point)*<br>*Note to enumerators: Confirm this through observation* | | | |
| 705. How many cows does this household own? *(numeric)* | | 706. How many goats or sheep does this household own? *(numeric)* | |
| 707. How many chickens does this household own? *(numeric)* | | 708. How many ducks or geese does this household own? *(numeric)* | |
| 709. What is the main cooking appliance?<br>*(1=Charcoal (stove); 2=Traditional jiko; 3=Improved jiko; 4=Kerosene stove; 5=other(specify))* | | 710. What is the main source of drinking-water for members of this household?<br>*(1=Piped water into dwelling(in the house); 2=Piped water to yard/plot; 3=Public tap/standpipe; 4=Tubewell/borehole; 5=Protected dug well; 6=Unprotected dug well; 7=Protected spring; 8=Unprotected spring; 9=Rainwater collection; 10=Cart with small tank/drum; 11=Tanker-truck; 12=Surface water (river, dam, lake, pond, stream, canal, irrigation channels); 13=Other (specify))*<br>710b. What is the distance to this source of water? *(km to 1 decimal place)* | ___ ___ . ___ |

| | | | |
|---|---|---|---|
| 711. How long does it take to go there, get water, and come back? *(minutes, 998=Don't know)* | | 712. Do you treat your water in any way to make it safer to drink?<br>(*0=no, 1=yes, 998=don't know)*<br><br>712b. What do you usually do to the water to make it safer to drink?<br>*(1=boil; 2=add bleach/chlorine; 3=strain it through a cloth; 4=use a water filter (ceramin, sand, composite etc; 5= solar disinfection; 6=let it stand and settle; 7= other (specify); 998=don't know)* | |
| 713. What is the main source of water used by this household for other purposes, such as cooking and hand washing?<br>*(1=Piped water into dwelling; 2=Piped water to yard/plot; 3=Public tap/standpipe; 4=Tubewell/borehole; 5=Protected dug well; 6=Unprotected dug well; 7=Protected spring; 8=Unprotected spring; 9=Rainwater collection; 10=Cart with small tank/drum; 11=Tanker-truck; 12=Surface water (river, dam, lake, pond, stream, canal, irrigation channels); 13=Other (specify))* | | 714. What is the distance to this source of water? *(km to 1 decimal place)* | |
| 715. Does the family own the home they live in? *(1=yes and 0=no)*<br><br>715b. **If no**, how much rent do they pay **each month (30 days)**? *(Ksh)* | ____<br>If yes, go to Q716, if no, go to Q715b. | 716. Does the family own the land they farm? *(0=no, 1=yes, NA= Not applicable(NA))*<br><br>716b. **If no**, how much rent do they pay **each month (30 days)**? *(Ksh)* | ____<br>If yes, go to Q717, If NA, go to Q717, if no, go to Q716b. |
| 717. Does the household have electricity? *(1=yes and 0=no)*<br><br>717b. **If yes**, what is the household main source of electricity?<br>*(1=Community generator; 2=Solar panels; 3=Own generator; 4=Car/motorcycle battery, 5=other(specify))* | ____<br>If yes, go to Q717b, if no, go to Q719. | 718. How much do you pay for electricity **each month (30 days)**? *(Ksh)* | |
| 719. Do any of the children in this household go to school? *(1=yes and 0=no)*<br><br>719b. How much do you pay for school fees (including day care) **each term (3 months)**? *(Ksh)* | ____<br>If yes, go to Q719b, if no, go to Q720. | 720. Does the household own a TV?<br>*(1=yes and 0=no)* | |

| | | | |
|---|---|---|---|
| 721. Does the household own a radio? *(1=yes and 0=no)* | | 722. Does the household own an electric fan? *(1=yes and 0=no)* | |
| 723. Does the household own a telephone? *(1=yes and 0=no)* | | 724. Does the household own a computer/laptop? *(1=yes and 0=no)* | |
| 725. On a scale of 1-9 how would you rate this household's economic status within your village?<br><br>*Note for enumerator: show the respondent the picture of the MacArthur ladder and explain that 1=lowest rung on the ladder and the lowest social economic status, 9=highest rung on the ladder and the highest social economic status* | | | |

## Section 8: Food access and prices

| | | | |
|---|---|---|---|
| 801. What is the distance to the closest food market? *(km) (one decimal place)*<br>*(Market is the place where the household gets most of their food)* | ___ ___ . ___ | 802. What mode of transport do you use to reach the closest food market? *(1=walking, 2=motorbike/bodaboda, 3=matatu, 4=other(specify))*<br>*(Market is the place where the household gets most of their food)*<br><br>802b. How much does it cost you to reach this market? *(Ksh, 0 if walking)* | |
| 803. How often do you visit the food market? *(1= daily, 2= weekly, 3= bi-weekly, 4= monthly, 5=never)*<br>*(Market is the place where the household gets most of their food)* | | 804. Do you grow your own food (e.g. fruit, vegetables)? *(1=yes and 0=no)* | |

| | 805. What are the top five food items consumed in this household on a **weekly basis (7 days)**? | 806. In the **last 7 days**, how much money did you spend on each item **for the whole household**? *(Ksh)* | 807. What quantity was consumed in the **last 7 days** *(Kgs)*? *(one decimal place)* | 808. What is the purchase price of 1 Kg? *(Ksh)* |
|---|---|---|---|---|
| 1 | | | ___ ___ . ___ | |
| 2 | | | ___ ___ . ___ | |
| 3 | | | ___ ___ . ___ | |
| 4 | | | ___ ___ . ___ | |

| | | | | |
|---|---|---|---|---|
| 5 | | | ___ ___ . ___ | |

| | | | |
|---|---|---|---|
| 809. How much of the total food consumed by the household in the **last 7days** was purchased? *(percentage)* | | 810. How much money did you spend on food in the **last 7 days**? *(Ksh)* | |
| 811. Have food prices increased or decreased over the **past 30 days**?<br>*(1= increased, 2= decreased, 3= stayed the same)* | | 812. Do children and pregnant women receive food before other household members?<br>*(1=yes and 0=no)* | |
| 813. Is the household able to access the basic food items the household needs?<br>*(1=yes and 0=no)* | ⌊_____⌋<br>If yes, go to Section 9, if no, go to Q813b | | |
| 813b. **If no to Q813**, why not? *(1= cost of the food, 2= unavailability of the food, 3= other(specify))* | | | |

## Section 9: Household Coping Strategies

| During the **last 7 days**, on how many days did this household use any of the following strategies to cope with lack of food or lack of money to buy food? | Number of days (0 to 7) |
|---|---|
| 901. How many days did the household rely on less preferred and/or less expensive food? | |
| 902. How many days did the household borrow food, or rely on help from a friend or relative? | |
| 903. How many days did the household have to reduce the quantity of food consumed by adults to ensure that children had enough to eat? | |
| 904. How many days did the household have to reduce the number of meals eaten per day? | |
| 905. How many days did the household have to reduce the portion size of meals? | |

| | 906. During the **last 30 days**, did anyone in this household have to engage in any following behaviors **due to a lack of food or a lack of money to buy food**?<br>*(1=yes and 0=no)* | 907. **If no to Q906,** please clarify:<br>*(1 = No, because it wasn't necessary,*<br>*2 = No, because I already sold those assets or did this activity and I cannot continue to do it,*<br>*NA = Not Applicable)* |
|---|---|---|
| a. Sold household assets/goods (radio, furniture, refrigerator, television, jewelry etc.) | | |
| b. Sold last female animals | | |
| c. Sent household members to eat elsewhere | | |

| | | |
|---|---|---|
| d. Purchased food on credit or borrowed food | | |
| e. Sold productive assets or means of transport (sewing machine, wheel barrow) | | |
| f. Borrowed money | | |
| g. Withdrew children from school | | |
| h. Begged | | |
| i. Engaged in illegal income activities | | |

# CHANGES MADE AFTER THE BASELINE

# JULY 2017 (FIRST MIDLINE)

**Table 7. Questions added to the July 2017 midline household survey**

| Section | Questions added |
|---|---|
| **Section 3: Child under 24 months and caregiver data** | 1. Is this the child the CT-OVC cash is meant for? *(1=yes; 0=no)* |
| **Section 5: CT-OVC cash transfer data** | 1. Has this household ever received the CT-OVC cash transfer? *(1=yes; 0=no)*<br>2. If yes, when was the last time? *(1= within the last 1 year; 2= 2 years ago; 3= over 5 years ago; 4= other (specify))*<br>3. If no, why not? *(1=Issues with beneficiary's national ID; 2=Beneficiary is deceased; 3=New beneficiary; 4=Name missing in the payroll; 5=Not communicated to go collect cash; 6=National ID or CT-OVC card lost; 7=Other (specify))***<br><br>***After the baseline, several households reported to have not received a cash transfer mostly due to these reasons, hence why these questions were added.* |

***Sections added to the household survey from the July 2017 midline survey***

**Section 10: Nutritional Counselling**

This section was introduced to capture data on nutritional counselling, which began to be implemented after the baseline survey (April, with enhanced coverage over May 2017). The data collected included the number of CHV visits in the last month and in the last 6 months, duration of the sessions, information delivered during the sessions and the important lessons learnt during the sessions.

**Table 8. Section 10 added to the July 2017 midline survey to capture data on Nutritional counselling**

| **Nutritional Counselling** | | | |
|---|---|---|---|
| 1001. In the past month, did any community health volunteer visit your household to provide you with nutrition related information (e.g. breastfeeding practices, complementary feeding practices, diarrhoea management, etc.)? *(1=yes and 0=no)* | ⌊____⌋<br>If yes, go to Q1001b, if no, go to Q1005. | 1002. How often did the community health volunteer return to your household for follow-up sessions in the past month? *(numeric, 998=don't know)* | |
| 1001b. **If yes to Q1001**, which topics were covered? *Allow multiple selection (1=IFAS (including anaemia); 2= Exclusive breastfeeding; 3= Complementary feeding practices; 4= Vitamins and supplements; 5= Dietary diversity; 6= Management of diarrhoea; 7= Vaccinations; 8= WASH practices; 9= Health care; 10= Other (specify))* | | 1002b. How often did the community health volunteer return to your household for follow-up sessions in the past 3 months? *(numeric, 998=don't know)* | |
| 1003. How long were the counselling sessions? (hours) | | 1004. Did other household members sit in on the sessions? (1=yes and 0=no) | ⌊____⌋<br>If yes, go to Q1004b, if no, go to Q1005. |
| | | 1004b. If yes to Q1004, who? Write full names- allow multiple HHs members | |
| 1005. Did you receive nutritional counselling from other organizations / Community Health Volunteers (CHVs)? *(1=yes and 0=no)* | ⌊____⌋<br>If yes, go to Q1006b, if no, go to Section 11: Additional Questions. | 1006. Do feel that the information provided has changed your behaviour as a mother/caregiver in relation to nutrition related aspects? *(1=yes and 0=no)* | |
| | | 1006b. **If yes**, please explain. *(text)* | |
| 1007. What are the three most important things you learnt? *(text)* | | 1008. Were you told about the importance of hand-washing? *(1=yes and 0=no)* | |

| | | | |
|---|---|---|---|
| 1009. Were you told about the importance of exclusive breastfeeding? *(1=yes and 0=no)* | | 1010. Were you told about the importance of Vitamin A for children 6-59 months? *(1=yes and 0=no)* | |
| 1011. Were you told about the importance of dietary diversity (a balanced diet) for your child? *(1=yes and 0=no)* | | 1012. Were you taught about managing diarrhoea with ORZ/zinc? *(1=yes and 0=no)* | |
| 1013. Were you taught about IFAS for pregnant women? *(1=yes and 0=no)* | | 1014. How could the nutritional counselling be improved? *(text)* | |

**Section 11: Additional Questions**

These questions were added to capture the changes in the household such as new pregnancies and births since the last survey and the rating of the cash transfer programme.

**Table 9. Section 11 added to the July 2017 midline survey to capture additional changes in the household**

| | | | |
|---|---|---|---|
| 1101. Have any household members discovered they were pregnant since the last survey? *(1=yes and 0=no)* | ⌊____⌋<br>If yes, go to Q1101b,<br>if no, go to Q1102. | 1102. Have there been any births since the last interview? *(1=yes and 0=no)* | ⌊____⌋<br>If yes, go to Q1101b,<br>if no, go to Q1102. |
| 1101b. If yes, how many members? *(numeric)* | | | |
| 1101c. For each member, what trimester is she in?<br>*(1= first, 2= second, 3= third)* | 1).<br>2).<br>3). | | |
| 1103. On a scale of 1-5, how would you rate the overall cash transfer programme? *(1= very efficient and 5= not at all efficient)* | | 1104. On a scale of 1-5, how satisfied are you with the cash transfer programme? *(1= very satisfied and 5=not at all satisfied)* | |
| 1105. How could the cash transfer programme be improved? *(text)* | | 1106. Has the main caregiver received any financial support from family or friends since the last survey? *(1=yes and 0=no)* | ⌊____⌋<br>If yes, go to Q1106b,<br>if no, end interview. |
| | | 1106b. If yes to Q1106, how much? *(Ksh)* | |

# NOVEMBER 2017 (SECOND MIDLINE)

**Table 10. Questions added to the November 2017 midline household survey**

| Section | Questions added |
|---|---|
| **Section 1: Identifier Section** | ***Questions to identify if the household is eligible for the study.***<br>1. Is this Household eligible for the NICHE study? *(1=yes and 0=no)*<br>2. When did the change occur?<br>3. Was this household permanently ineligible? That is to be dropped from the study due to changes such as death of the child or permanent relocation. Or temporarily not eligible due to travel? |
| **Section 3: Child under 24 months and caregiver data** | 1. Child travel data from January 2017 and future travel plans during the study period. |
| **Section 5: CT-OVC cash transfer data** | 1. Number of cash transfers received every month since January 2017 and the amounts received each time. |
| **Section 10: Nutritional Counselling data** | 1. Number of stickers left behind by the CHV after the visits. |

# MARCH 2018 (THIRD MIDLINE)

**Table 11. Questions added to the March 2018 midline household survey**

| Section | Questions added |
|---|---|
| **Section 3: Child under 24 months and caregiver data** | 1. Caregiver's, if mother, gravidity and parity data<br>2. Is the child a twin?<br>3. Was the child delivered in a hospital or at home?<br>4. Did the mother of the child practice exclusive breastfeeding?**<br>5. Caregivers completed education level.<br><br>**Added as a confirmation question to confirm the findings from the other surveys. |
| **Section 4: Pregnant woman data** | 1. Pregnant woman's gravidity and parity.<br>2. Delivery place of past pregnancies.<br>3. Number of children born to the pregnant woman that are still alive |
| **Section 6: Livelihoods and income** | 1. Confirmation question to validate the number of people that generate an income mentioned in the household roster. |
| **Section 8: Food Access and price data** | 1. Growing of green grams in the household.<br>2. Amount of green grams produced in the last harvest<br>3. Amount consumed, sold and gifted to friends and family in the household<br>4. What the household spent the money from the sale of green grams. |

| | |
|---|---|
| | 5. Consumption of green grams by the children and the pregnant women in the household. |
| **Section 10: Nutritional Counselling data** | ***Questions targeted to the households in the intervention arm.***<br>1. Attendance of the beneficiary learning forums by the household members.<br>2. Data on SMSs sent to the household on key nutritional counselling messages. |

# JUNE 2018 (ENDLINE)

**Table 12. Questions added to the June 2018 endline household survey**

| Section | Questions added |
|---|---|
| **Section 1: Household Identifier Section** | 1. How long has this household been a beneficiary of the CT-OVC program?<br>2. How many children were initially registered as the CT-OVC children?<br>3. How many of these children are still under 18?<br>4. How many of these children that were initially registered as the CT-OVC children were registered since they are orphans? |
| **Section 3: Child under 24 months and caregiver data** | 1. Is this a child born to the pregnant woman being followed up on in this household?<br>2. How many days the child has been away from home for a period longer than 1 months since the baseline (January 2017 or October 2017 depending on the cohort the household belongs to).<br>3. SMSs on key nutritional counselling messages the caregiver received. |
| **Section 4: Pregnant woman data** | 1. How many days the pregnant woman has been away from home for a period longer than 1 months since the baseline (January 2017 or October 2017 depending on the cohort the household belongs to).<br>2. SMSs on key nutritional counselling messages the pregnant woman has received. |
| **Section 5: CT-OVC cash transfer data** | 1. Number of CT-OVC cash transfers the household has received since the baseline.<br>2. Number of NICHE additional cash transfers the household has received since the baseline. |
| **Section 7: Social Economic status and wealth indicators** | 1. Number of sanitation facilities in the household.<br>2. Availability of soap in the household. |
| **Section 10: Nutritional Counselling data** | 1. Number of CHV visits since the baseline.<br>2. Average amount of time the CHV spent in the household |
| **Section 11: Additional Questions** | 1. Mother and Child booklet data for all the children in the household whose data had been collected in previous surveys by Kimetrica. Data on prenatal and postnatal visits and routine vaccination and growth monitoring data. |

**Section 12: Nutritional knowledge quiz**

***Part 1. Nutritional knowledge questions asked to all the households***

1201. What should you give to your child in the first 6 months of life?

*1= Breastmilk and some porridge or cereals if they are hungry*
*2=Only breastmilk*
*3=Breastmilk and other milk or fluids if they are thirsty*

1202. For how long should you breastfeed your child?
*1=Until the child starts to eat food*
*2=Until they are 6 months old*
*3= Until they are receiving a full and balanced diet and usually before they reach two years of age*

1203. Which solid food should you first introduce to your child while starting complementary feeding?
*1=Green vegetables and fruit*
*2=Staple food such as porridge, pureed banana or potato*
*3=Protein rich foods such as meat and eggs*

1204. As the child gets older, which of the following should the diet contain?
*1=More variety of food types*
*2=More cereals to fill them up*
*3=More milk*

1205. What is the BEST reason to wash your hands before preparing the child's food?
*1=To ensure the utensils do not get dirty*
*2=To prevent illness like diarrhoea*
*3=To prevent the food smelling bad*

1206. Which of the following best describes what to do after your child has defecated (baada ya haja kubwa)?
*1=Put the faeces in a latrine and then wash your hands with soap and water,*
*2=Put the faeces in a bag and burn it ensuring that you do not touch it with your hands,*
*3=Wash your hands before collecting the faeces and putting it in a latrine.*

1207. Which of the following tablets do you need to take when you are pregnant? *1=Vitamins only*
*2=Iron folate supplements including IFAS*
*3=Calcium tablets*

1208. When should you visit the health centre with your child?
*1=For routine check-ups, vaccinations and when they are sick,*
*2=Only when they are sick,*
*3=Only when requested to go for checkups and vaccinations*

1209. When should your child receive Vitamin A?
*1=At birth*
*2=Twice a year until they are 5 years old*
*3=When they reach 5 years old*

***Part 2. Experience with the programme (intervention households only)***

1210. Did you ever have to wait longer than you planned to for your additional NICHE cash transfer? *(1=yes and 0=no)*

1210b. Please explain your response? *(text)*

1211. Did you ever have trouble accessing the additional NICHE cash transfer? *(1=yes and 0=no)*

1211b. If no to Q1211, why couldn't you access it? *(text)*

1212. Was the additional NICHE cash transfer you received enough to buy additional food items that you learned about in counselling? *(1=yes and 0=no)*

1212b. If yes to Q1212, please provide an example(s). *(text)*

1213. How did you feel about how often the CHVs came your house? (1=it was a bother to me, 2=it was good that they came these many times, 3=the household is indifferent)

1213b. Please explain *(text)*

1214. Was the information you received from the CHVs instructive/informative? *(1=yes and 0=no)*

1214b. If no in Q1214, please explain. *(text)*

1215. Did you ever feel as though the CHVs did not stay long enough during their visits? *(1=yes and 0=no)*

1215b. If yes to Q1215, please provide an example(s) on when the time was not enough. *(text)*
1216. Were you happy with how the CHVs conducted themselves in your households? *(1=yes and 0=no)*

1216b. If no, please explain. *(text)*

1217. Do you think the additional NICHE cash transfer and nutritional counselling you have received has enabled you to improve the way you look after the child or yourself when you are pregnant? *(1=yes and 0=no)*

# ANNEX 5. KEY VARIABLES

Table 11 presents the key variables that were analysed for the NICHE evaluation.

**Table 13. Key Variables**

| General theme | Variable | Details | |
|---|---|---|---|
| **Primary Outcomes** | | | |
| **Child** | Stunting (HAZ) | Height for age < –2 standard deviations (SD) of the WHO Child Growth Standards median | Binary |

| | | | |
|---|---|---|---|
| **anthropometrics**[5] | Underweight (WAZ) | Weight for age < –2 SD of the WHO Child Growth Standards median | Binary |
| | Wasting (WHZ) | Weight for height < –2 SD of the WHO Child Growth Standards median | Binary |
| **Secondary outcomes** | | | |
| **IYCF best practices (WHO, 2010)** | Early breastfeeding initiation | Children aged 0-23 months put to breast within 1 hour of birth | Binary |
| | Exclusive breastfeeding | Infants less than 6 months exclusively breastfed | Binary on subsample |
| | Complementary feeding initiation | Infants aged 6-8 months who receive solid, semi-solid or soft foods | Binary on subsample |
| | Minimum acceptable diet | Composite measure for 6-23 month olds of minimum dietary diversity (4 out of 7 food groups)[6] and minimum meal frequency (dependent on age on breastfed status)[7] calculated separately for breastfed and non-breast children (who additionally require 2 milk feeds and dietary diversity not including milk feeds) | Binary on subsample |
| **WASH best practices** | Improved water source for drinking | Household utilisation of an improved water source[8] for drinking (additional constraints include is within 30 minutes return journey; for all household water if drinking is bottled; if appropriately treated) | Binary |
| | Improved sanitation facility | Household utilisation of an improved sanitation facility[9] | Binary |

[5] Acute malnutrition, also known as 'wasting plus kwashiorkor' is characterized by a rapid deterioration in nutritional status over a short period of time. In children, it can be measured using the weight-for-height nutritional index. There are different levels of severity of acute malnutrition. Moderate acute malnutrition (MAM) is defined as a weight-for-height between -3 and -2 z-scores below the median of the WHO Child Growth Standards. Severe acute malnutrition (SAM) is defined by a weight-for-height below -3 standard deviations of the WHO standards, a MUAC less than 115mm and/or bilateral oedema (WHO and UNICEF, 2009).
Chronic malnutrition, also known as 'stunting', is a form of growth failure that develops over a long period of time. Inadequate nutrition over long periods of time (including poor maternal nutrition and poor infant and young child feeding practices) and/or repeated infections can lead to stunting. In children, it can be measured using the height-for-age nutritional index (UNICEF, 2012).

[6] Grains, roots and tubers; legumes and nuts; dairy products (milk, yogurt, cheese); flesh foods (meat, fish, poultry, liver or other organs); eggs; vitamin A-rich fruits and vegetables; and other fruits and vegetables.

[7] Twice for breastfed infants aged 6–8 months, three times for breastfed children aged 9–23 months and four times for non-breastfed children aged 6–23 months.

[8] Improved are piped water supply into the dwelling; piped water to a yard/plot; a public tap/standpipe; a tube well/borehole; a protected dug well; a protected spring; and rainwater and "unimproved" are: an unprotected dug well; an unprotected spring; a cart with a small tank/drum; a water tanker-truck; and surface water.

[9] Improved are flush to piped sewer system; flush to septic tank; flush/pour flush to pit; composting toilet; VIP latrine; pit latrine with a slab, and "unimproved" are: flush/pour flush elsewhere; pit latrine without a slab/open pit; bucket; and a hanging toilet (also includes no use of a latrine or open defecation)

| | | | |
|---|---|---|---|
| | Sanitary disposal of children's stools | Caregivers reporting hygienic disposal of stools[10] of children under 2 years | Binary |
| | Handwashing facilities | Households with a handwashing station with soap and water (additional constraints include proximity to sanitation facilities and food preparation area) | Binary |
| | Handwashing practices | Caregivers handwashing practices after using the toilet/disposing of child's stools and before food preparation/feeding the child | Binary |
| **General health of the child (caregiver reported)** | Recent diarrhoea episode | Watery stools at least 3 times over a period of 24 hours in the past 2 weeks | Binary |
| | Recent respiratory infection | Combination symptoms of cough, fever and fast breathing in the past 2 weeks | Binary |
| | Recent malaria episode | Confirmed malaria at a medical facility in past 2 weeks | Binary |
| | Health centre visits for illness in past 6 months | At least one visit to a health facility for illness of the child in past 6 months | Binary |
| **Health Service utilisation** | Routine health visits for child | At least one visit to a health facility for a routine check-up in past 6 months | Binary |
| | Complete immunisations | List of vaccinations given to the child at certain ages in months | Binary on sub-sample |
| | Routine ANC health visits for pregnant woman * | At least one or two ANC visits if in second or third trimester | Binary on sub-sample |
| | Delivery in a health facility | Delivered in a hospital/assisted by medical personnel for those pregnant women who had a previous birth | Binary on sub-sample |
| **Food consumption** | Dietary diversity of child | Minimum of 4 food groups out of 7 in past 24 hours | Binary |
| | Dietary diversity of pregnant woman * | Minimum of 5 food groups out of 7 in past 24 hours | Binary |
| | Dietary diversity of main caregiver | Minimum of 5 food groups out of 7 in past 24 hours | Binary |
| **Stress and coping strategies** | Caregivers stress | Caregivers rated stress as never or rarely worried as a caregiver (1 and 2) | Binary |
| | Caregivers happiness | Caregivers rated happiness levels as often and always happy (4 and 5) | Binary |
| | Household food availability stress | Caregiver reported never or rarely worried about getting enough food (1 and 2) | Binary |
| **Other covariates** | | | |
| **Child characteristics** | Child age | Reported date of birth: relevant age-groups | Categorical, mean and binary |

[10] Sanitary disposal is child used toilet/latrine; put/rinsed faeces into the toilet or latrine; or buried the faeces; and unsanitary disposal is put/rinsed faeces into drain or ditch; faeces thrown into the garbage, and faeces left in the open.

| | | | |
|---|---|---|---|
| | Sex | Male or Female | Binary |
| | Low birth weight | Recorded birth weight less than 2.5 kg | Binary |
| **Caregiver characteristics** | Age in years | Classified into under 18, 18-34, 34 and above | Categorical |
| | Education level | More than primary level | Binary |
| | Relationship to child | Mother to the child | Binary |
| **Household characteristics** | Household size | More than 6 members in the household | Binary |
| | Dependency ratio | More than 2 children to every adult | Binary |
| | Disabled household member | Households that have a member that is disabled. | Binary |
| | Household member with chronic disease | Households that have a member that is disabled. | Binary |
| | Main livelihood (or source of income) | Classification into Farming, Unskilled, Skilled labour, Business | Categorical |
| | Electricity | Household with access to electricity | Binary |
| | Key wealth assets | Ownership of at least one cow or at least one radio | Binary |

*No pregnant women left at the endline so these indicators will not be available then, but will need to be the child that is born into the study

A few variables were originally identified in the Inception Report (Guyatt et al., 2016) but were removed from the analysis because they were either unreliable or there was insufficient data. These are detailed below, with an explanation as to why they were removed:

- MacArthur Ladder: most households provided a ranking that was around the same range, limiting its analytical power.
- MUAC: Subject to user error and experience, and unreliability. Weight, which is much more accurate, was sufficient for z-score calculations.
- Caregivers' time: respondents did not understand the question in early surveys and the time was therefore mostly overestimated (added up to more than 24 hours per day).
- Consumption of vitamins: very few pregnant women consumed these.
- Household income: income estimates, based on recall, were unreliable.
- Household ownership: nearly all households owned their home.
- Religion: nearly all households self-reported as Christian, erasing any comparative component of the analysis.
- Financial assistance, including: paternal support, participation in other programmes, financial support from friends or family: data was not amenable for analysis.
- Market prices of key food types: data was not amenable for analysis.
- Accessibility of markets, own food production and health facilities: the values varied across the surveys and were therefore not reliable to use for analysis.

# ANNEX 6. SAP

## DIFFERENCE-IN-DIFFERENCES BACKGROUND

A popular regression method for RCT's, discussed in the Inception Report in detail, is using binary (dummy) variables to calculate a difference-in-differences (DiD) between the control and treatment groups. Variables are inserted to describe when you collected the data (*Time*) and who you collected the data from (*Treatment)* to represent the four categories of study participants (Table 14).

**Table 14. Difference in Differences premise**

| | *Time* = 0 | *Time* = 1 |
|---|---|---|
| *Treatment* = 0 | Baseline control group | Post-trial control group |
| *Treatment* = 1 | Baseline treatment group | Post-trial treatment group |

This way only certain regression coefficients that are not suppressed with a value of 0 will be evaluated. Here's what the equation looks like:

$$y_{ic} = \beta_0 + \beta_1 Time + \beta_2 Treatment_c + \beta_3 (Time \cdot Treatment_c) + \gamma X_{ic} + \varepsilon_{ic}$$

Where,

- $Y_{ic}$: the outcome variable (z-score) that varies on the individual ($i$) and cluster ($c$) levels
- $\beta_0$: the baseline average z-score given covariates that have been unaltered by treatment
- $\beta_1$: the mean difference between the baseline and post-trial measurements
- $\beta_2$: the mean difference between the control and treatment groups, ignoring time
- $\beta_3$: the mean difference-in-difference between the control and treatment groups. This is the coefficient that will record the treatment effect
- $X_{ic}$: the matrix of covariates that vary on the individual ($i$) and cluster ($c$) levels
- $\gamma$: the coefficients for covariates in $X$ determines by the baseline regression
- $E_{ic}$: the error for each term

# NICHE STATISTICAL ANALYSIS

## ADJUSTING FOR DROPOUTS AND EXCLUSIONS

Due to high dropout after the first baseline study in January 2017, a second baseline study was conducted in October 2017 in Machakos County to acquire more samples. For the statistical analysis using DiD modelling, *the total number of samples throughout all studies* meeting the criteria (i.e. children under the age of 2) was used. Not all of the subjects were present from baseline to endline. Figure 11 and 12, below, show the number of households, number of children under 2 and number of pregnant women in each study.

**Figure 11. Breakdown of the January cohort**

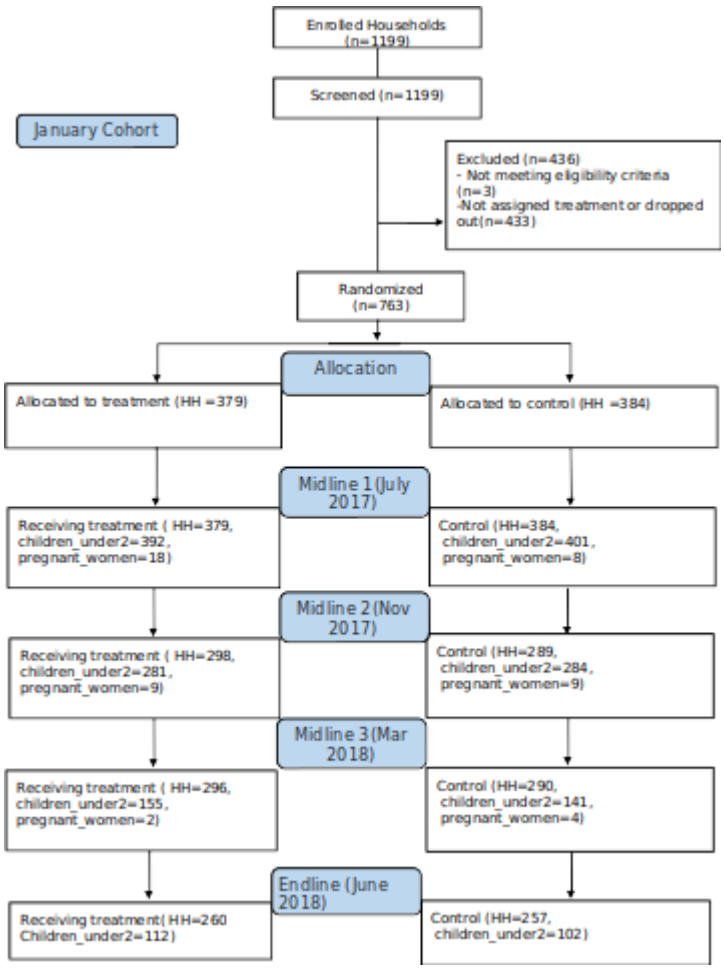
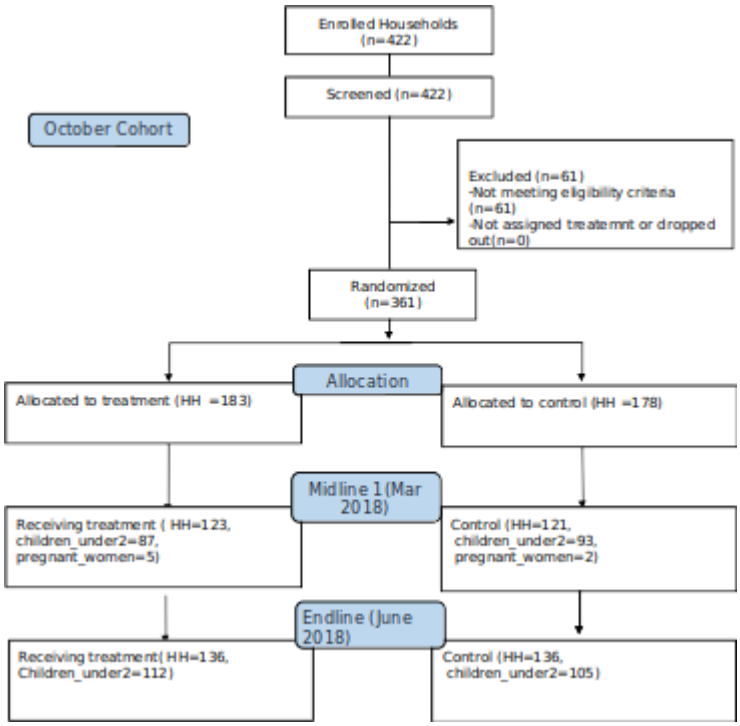


**Figure 12. Breakdown of the October cohort**




## WEIGHTING AND RUNNING MODELS

Each DiD model takes into account the time, treatment intensity (i.e., percentage of additional cash received, number of counselling visits), interaction term of the cash intervention and counselling (what is reported most in the Results section), as well as the appropriate covariates as listed in Annex 5.

For binary outcome response variables, a logistic function was applied to the DiD model. Some of the secondary outcome variables had very skewed distributions (for example, frequencies of malaria and respiratory infection), and a class weighted logistic regression (the scikit-learn package, from Python) was used to adjust weights of the binary outcome values as inversely proportional to class frequencies.

This approach effectively helps the model to train and fit better when a frequency in outcome is very low.

# ANNEX 7. DATA COLLECTION TOOL FOR ENDLINE FGDS

The NICHE endline FGDs were held with groups of six to eight participants for a duration of 1.5 hours to allow active discussion of 1 hour with the need for translation. Each FGD was held by a moderator and facilitated by a translator, and was recorded to ensure data quality.

At the start of the FGD an introduction was provided on the purpose of the exercise:

*We work for an independent research organization called Kimetrica, based in Nairobi [introduction of Kimetrica staff present]. We have invited you here today because you are beneficiaries of the NICHE programme, the programme which in the past 1 year has provided you with the "top up money for the child or pregnant woman". Under this programme you have also received visits from Community Health Volunteers (CHVs), people who have visited your household to provide you with nutritional counselling, and also carried calendars and t-shirts for children with the Shika Tano logo. As beneficiaries of this programme we would like to hear about your experience with the programme, and ask your opinion about the additional cash and nutritional counselling you received, how this has affected your behaviours, and how the programme could be improved.*

*There are no right or wrong answers to the questions we may ask. We would just like to hear your opinion, and we would like to hear the opinion of all the people here today. We will limit the discussion to 1 to 1.5 hours to avoid taking up too much of your time.*

The checklist used in each FGD is as follows:

(1) **Effectiveness of implementation:** The NICHE programme aimed to provide you with an additional cash top-up for the child and nutritional counselling primarily through household visits by CHVs [*prompt: CHVs wear yellow and green Shika Tano t-shirts, and normally carry calendars and sometimes t-shirts*].

Can you explain the process of collecting the **cash**? For example, where you go to collect it, how you get there, how long you normally have to wait to receive the cash, etc. Once you collect the money, who decides how it is spent in your household? Did the process of receiving the top-up run smoothly?
*Prompts: Did you or anyone you know have any problems or issues in accessing the cash? Were there any delays in payments? For example, during the election period last year? If yes, how were these problems addressed and resolved, if at all?*

Can you explain the process of receiving the **nutritional counselling** from the CHVs? How often did the CHVs visit your household, and how long did they stay? Did the nutritional counselling visits run smoothly? Do you feel the CHVs were good at providing the nutritional counselling? Did they explain things?
*Prompts: Were there any problems with nutritional counselling? Did the national elections last year affect the nutritional counselling visits you received? Were the visits by CHVs too short or too infrequent? If yes, how were these problems addressed and resolved, if at all?*

How could the programme be **improved in the future**? Is there anything you would change, both for the process of receiving and collecting the cash and the nutritional counselling?
*Prompts: Could communication about the programme be improved? Would you rather receive the nutritional counselling in other ways?*

**(2) Relevance:** The NICHE programme aimed to provide you with sufficient information and some financial support to help you make positive changes to improve the nutritional status of your children.
Can you describe whether and how the information and extra **cash** you received was useful? Was the cash provided sufficient to make changes? Was the timing of the cash appropriate to needs?
*Prompts: Was it available on a regular enough basis to allow you to keep to these positive changes? Would it be better to provide more during the lean season and less during the harvest season?*

Was the **nutritional counselling** relevant to your situation and your needs? What did you discuss when the CHVs visited your household? Were the things they told you new to you, or did you know them already? Were there things that they did not tell you that you wanted to know about?
*Prompts: What are the aspects do you think were most useful? Do you remember any specific examples of what they told you when they visited your house?*

**If you were in charge of the programme, what would you do to make the additional cash and nutritional counselling more relevant to the communities in this area?**

**(3) Positive behaviour changes and constraints:** We would like to understand more about the impact of the NICHE programme on you and your child.

**Changes in knowledge**: What do you feel are the key things you learned as a result of this programme?
*Prompts*: *For example, in relation to feeding of the child (and yourself if in the pregnant women group), use of health services to support the child's growth, handwashing and other safe hygiene practices.*

**Changes in practices**: What was the first thing you changed after you received a visit from this CHV? Why? Do you still do that? Why/Why not? What other behaviours did you change after receiving the nutritional counselling? Were there some behaviours you were willing to change but could not change? Why?
**What can be done by the programme to ensure that you are able to make the changes you want to make?**

**Use of cash top-up**: How did your household normally use the top-up cash? How does the household decide what to spend the money on?
*Prompts: Was the extra cash used to buy more nutritious foods for the child, the pregnant woman or both, or was it used for other expenses (such as school fees, transport, etc.)? Did you spend it on food, soap or other items? Or did you have other bills to pay? Were there times of the year when you spent the money on food, and other times this money was not enough to buy food? Do the prices of nutritious foods that you were advised to buy change throughout the year?*

# ANNEX 8. SUMMARY DESCRIPTIVE STATISTICS OF STUDY POPULATION

Table 15 to Table 19 present summary descriptive statistics of the study population across surveys.

### Table 15. Population Count, Children Ages 0-24 months

| | Baseline 1 | Midline1 | Baseline 2 | Midline2 | Midline3 | Endline |
|---|---|---|---|---|---|---|
| count of female(control) | 170 | 193 | 47 | 148 | 164 | 155 |
| count of male(control) | 155 | 188 | 43 | 139 | 158 | 162 |
| count of female(treated) | 159 | 196 | 41 | 137 | 167 | 176 |
| count of male(treated) | 158 | 174 | 46 | 139 | 165 | 152 |

### Table 16. MUAC Averages, Children Ages 0-24 months

| | Baseline 1 | Midline1 | Baseline 2 | Midline2 | Midline3 | Endline |
|---|---|---|---|---|---|---|
| MUAC_mean(control_female) | 14.03 | 14.129534 | 14.259574 | 14.446622 | 14.431707 | 14.223226 |
| MUAC_mean(control_male) | 14.37 | 14.683511 | 14.437209 | 14.486331 | 14.458861 | 14.516667 |
| MUAC_mean(treated_female) | 13.99 | 14.430612 | 14.068293 | 14.260584 | 14.197006 | 14.154545 |
| MUAC_mean(treated_male) | 14.51 | 14.592241 | 14.326087 | 14.582014 | 14.541818 | 14.544079 |
| MUAC_stdv(control_female) | 1.35 | 2.638084 | 1.125912 | 1.888037 | 1.447221 | 1.116338 |
| MUAC_stdv(control_male) | 1.58 | 3.602048 | 1.292842 | 1.014689 | 1.372391 | 1.118298 |
| MUAC_stdv(treated_female) | 1.45 | 4.450478 | 1.460726 | 1.243356 | 1.325942 | 1.139314 |
| MUAC_stdv(treated_male) | 1.67 | 1.172079 | 1.721683 | 1.323328 | 1.231649 | 1.168388 |

### Table 17. Weight Averages, Children Ages 0-24 months

| | Baseline 1 | Midline1 | Baseline 2 | Midline2 | Midline3 | Endline |
|---|---|---|---|---|---|---|
| weight_mean(control_female) | 7.770588 | 8.429534 | 7.976596 | 8.780405 | 8.693293 | 8.928387 |
| weight_mean(control_male) | 8.274194 | 8.870213 | 8.269767 | 9.111511 | 9.105696 | 9.430864 |
| weight_mean(treated_female) | 7.743396 | 9.021939 | 7.426829 | 8.567153 | 8.574251 | 8.901705 |
| weight_mean(treated_male) | 8.463924 | 9.166667 | 8.15 | 9.36259 | 9.44 | 9.686184 |
| weight_stdv(control_female) | 1.761879 | 1.905149 | 1.747074 | 1.495283 | 1.588344 | 1.521438 |
| weight_stdv(control_male) | 1.673702 | 1.766675 | 1.83076 | 1.516866 | 1.56316 | 1.556125 |
| weight_stdv(treated_female) | 1.914255 | 6.883788 | 1.935333 | 1.575787 | 1.728359 | 1.724893 |
| weight_stdv(treated_male) | 2.031667 | 1.671465 | 2.092075 | 1.746436 | 1.810094 | 1.665149 |

### Table 18. Weight Averages, Children Ages 0-24 months

| | Baseline 1 | Midline1 | Baseline 2 | Midline2 | Midline3 | Endline |
|---|---|---|---|---|---|---|
| length_mean(control_female) | 67.708647 | 70.65829 | 66.102128 | 73.224324 | 72.532927 | 73.464516 |
| length_mean(control_male) | 69.633548 | 71.526064 | 69.011628 | 73.767626 | 73.170886 | 74.082099 |
| length_mean(treated_female) | 68.130818 | 70.043367 | 66.256098 | 72.245985 | 72.188623 | 72.249432 |
| length_mean(treated_male) | 70.02481 | 73.312069 | 67.047826 | 74.423741 | 74.74303 | 75.184868 |
| length_stdv(control_female) | 8.909832 | 9.16831 | 10.490959 | 5.96674 | 6.654009 | 6.312354 |
| length_stdv(control_male) | 7.10695 | 9.462474 | 7.785616 | 6.151166 | 8.079323 | 8.116511 |
| length_stdv(treated_female) | 8.415853 | 9.743453 | 8.379381 | 6.54808 | 7.630206 | 9.992386 |
| length_stdv(treated_male) | 8.64141 | 6.91149 | 7.66892 | 6.866634 | 6.828056 | 7.949399 |

### Table 19. Age Averages, Children Ages 0-24 months

| | Baseline 1 | Midline1 | Baseline 2 | Midline2 | Midline3 | Endline |
|---|---|---|---|---|---|---|
| age_mean(female_control) | 10.16 | 12.974093 | 9.361702 | 14.682432 | 14.195122 | 14.606452 |
| age_mean(male_control) | 10.19 | 13.010638 | 9.162791 | 14.064748 | 13.56962 | 14.759259 |
| age_mean(female_treatment) | 9.75 | 12.260204 | 7.804878 | 13.408759 | 13.712575 | 14.386364 |
| age_mean(male_treatment) | 10.34 | 12.902299 | 7.369565 | 14.805755 | 14.460606 | 15.348684 |
| age_stdv(female_control) | 5.76 | 6.784967 | 5.227126 | 5.907492 | 5.949561 | 5.651683 |
| age_stdv(male_control) | 5.65 | 6.842764 | 6.387973 | 5.913885 | 6.17821 | 6.146054 |
| age_stdv(female_treatment) | 6.01 | 6.743555 | 5.577721 | 5.638047 | 6.362637 | 6.170773 |
| age_stdv(male_treatment) | 5.83 | 6.220114 | 4.692115 | 6.016737 | 5.947429 | 5.587664 |

### Table 20. Summary Statistics, Pregnant Women

| | Baseline 1 | Midline1 | Baseline 2 | Midline2 | Midline3 | Endline |
|---|---|---|---|---|---|---|
| average_age(control) | 23.8 | 23.5 | 27.5 | 24.00 | 28.666 | nan |
| average_age(treatment) | 22.7 | 22.89 | 26 | 24.77 | 26.1428 | nan |
| stdv_age(control) | 2.9 | 4.47 | 13.435029 | 6.244 | 8.5945 | nan |
| stdv_age(treatment) | 5.0 | 5.697 | 4.41588 | 8.00 | 7.537 | nan |
| average_MUAC(control) | 24.0 | 24.257 | 27.85 | 25.5375 | 25.7 | nan |
| average_MUAC(treatment) | 22.0 | 25.65 | 27.88 | 25.1 | 26.98 | nan |
| stdv_MUAC(control) | 2.7 | 2.018 | 6.576093 | 1.9449 | 2.954093 | nan |
| stdv_MUAC(treatment) | 11.1 | 1.95 | 2.120613 | 2.7006 | 3.0995 | nan |
| average_trimester(control) | 1.3 | 2.75 | 1 | 2.2222 | 2.8333 | nan |
| average_trimester(treatment) | 1.2 | 2.55 | 1.4 | 2.777 | 2.8571 | nan |
| stdv_trimester(control) | 0.5 | 0.46 | 0 | 0.666 | 0.4082 | nan |
| stdv_trimester(treatment) | 0.4 | 0.61 | 0.55 | 0.44 | 0.377 | nan |
| average_Hhsize(control) | 5.8 | 6.5 | 6.5 | 10.3333 | 9.166 | nan |
| average_Hhsize(treatment) | 8.5 | 7.11 | 8.8 | 7.1111 | 8.4285 | nan |
| stdv_Hhsize(control) | 1.7 | 1.92 | 4.94 | 2.0615 | 2.4013 | nan |
| stdv_Hhsize(treatment) | 3.3 | 2.05 | 3.768 | 1.7638 | 3.1547 | nan |
| average_income_indicator(control) | 1.3 | 1.2 | 3 | 1.6666 | 1.8333 | nan |
| average_income_indicator(treatment) | 1.7 | 1.38 | 1.6 | 1.1111 | 1.2857 | nan |
| stdv_income_indicator(control) | 0.5 | 0.46 | 0 | 1 | 0.7527 | nan |
| stdv_income_indicator(treatment) | 1.0 | 0.7 | 0.89 | 0.6 | 0.4879 | nan |

### Table 21. Household characteristics at Endline

| | Cohort 1 Control (n=257) | Cohort 1 Intervention (n=261) | Cohort 2 Control (n=136) | Cohort 2 Intervention (n=140) | Overall (n=794) |
|---|---|---|---|---|---|
| **Household characteristics** | | | | | |
| Female HoH | 57 | 69 | 71 | 75 | 67 |
| Household size: mean (range) | 8 (3-18) | 7 (3-16) | 7 (3-15) | 7 (3-14) | 7 (3-18) |
| **Main livelihood** | | | | | |
| Farming (%) | 73 | 79 | 73 | 74 | 75 |
| Unskilled labour (%) | 18 | 11 | 16 | 13 | 14 |
| Skilled labour (%) | 5 | 3 | 3 | 2 | 4 |
| Business (%) | 3 | 6 | 8 | 6 | 5 |
| **Main source of income** | | | | | |
| Unskilled labour (%) | 51 | 47 | 43 | 47 | 47 |
| Sale of crops (%) | 15 | 15 | 18 | 15 | 15 |
| Petty Trade (%) | 9 | 10 | 13 | 8 | 10 |
| Remittances/gifts (%) | 3 | 3 | 3 | 6 | 4 |
| **Income bracket based on last month's income** | | | | | |
| Very low < 1000 (%) | 5 | 5 | 6 | 6 | 6 |
| Low 1000-3000 (%) | 27 | 30 | 29 | 24 | 28 |
| Mod 3000-10,000 (%) | 63 | 59 | 59 | 61 | 61 |
| High > 10,000 (%) | 5 | 5 | 6 | 7 | 6 |
| **Wealth asset ownership** | | | | | |
| Radio/s (%) | 42 | 49 | 49 | 56 | 48 |
| Cow/s (%) | 47 | 52 | 47 | 53 | 50 |
| Cow and/or radio (%) | 65 | 71 | 71 | 81 | 71 |
| Access to Electricity (%) | 27 | 38 | 49 | 49 | 38 |
| Access to a latrine (%) | 77 | 90 | 95 | 96 | 88 |
| Access to an improved latrine (%) | 29 | 31 | 48 | 47 | 36 |
| Access to an improved drinking source (%) | 28 | 32 | 46 | 49 | 36 |
| Handwashing station present (%) | 13 | 61 | 15 | 76 | 40 |
| Soap and water available at the handwashing station (%) | 4 | 30 | 5 | 40 | 19 |

### Table 22. Caregiver Characteristics

| Caregiver Characteristics | Cohort 1 Control (n=183) | Cohort 1 Intervention (n=187) | Cohort 2 Control (n=144) | Cohort 2 Intervention (n=149) | Overall (n=663) |
|---|---|---|---|---|---|
| **Relationship to the child** | | | | | |
| Mother (%) | 75 | 82 | 87 | 89 | 83 |
| Grandparent (%) | 17 | 16 | 12 | 9 | 14 |
| Other (%) | 7 | 2 | 1 | 2 | 3 |
| **Age** | | | | | |
| Under 18 (%) | 2 | 0 | 1 | 3 | 1 |
| 18-34 (%) | 66 | 72 | 79 | 76 | 73 |
| 35 and above (%) | 33 | 28 | 19 | 21 | 26 |
| Mean (n) | 32 | 31 | 29 | 27 | 31 |
| **Education Level** | | | | | |
| No education or Primary only (%) | 83 | 80 | 68 | 71 | 76 |
| Secondary or Tertiary (%) | 17 | 20 | 32 | 29 | 24 |
| **Employment Status** | | | | | |
| Employed (%) | 2 | 2 | 1 | 2 | 2 |
| Casual or unemployed (%) | 98 | 98 | 99 | 98 | 98 |

# ANNEX 9. RCT FINDINGS

Statistics are presented in table format here with global model results regarding fit and significance. An additional table is included, per variable, if there are statistically significant individual variables that have important implications for findings, as well. Significant results are highlighted in yellow throughout Annex 9.

### Table 23. Exclusive Breastfeeding (in children less than 6 months old)

| | |
|---|---|
| DiD (cashxcounsel) | -0.0009 |
| f1_score | 0.8383 |
| accuracy | 0.743 |
| P-val (cashxcounsel) | 0.995 |
| 0.71999766 | *with treatment* |
| 0.586738822 | *no treatment* |
| **0.133258837** | *incremental effect for 50% additional cash AND 1 counseling visit* |

***Variables included in model:*** 'time','counsel_visits', 'intensity_percent', 'cashxcounsel', 'age(months)', 'HH_size', 'income_indicator', 'gender', 'food_avail_stress', 'caregiver_stress'

### Table 24. Minimum Acceptable Diet

| | |
|---|---|
| DiD (cashxcounsel) | -0.1463 |
| f1_score | 0.5606 |
| accuracy | 0.6253 |
| P-val (cashxcounsel) | 0.001 |
| 0.637550885 | *with treatment* |
| 0.199407757 | *no treatment* |
| **0.438143128** | *incremental effect for 50% additional cash AND 1 counselling visit* |

***Variables included in model:*** 'time', 'counsel_visits', 'intensity_percent', 'cashxcounsel', 'age(months)', 'HH_size', 'income_indicator', 'gender', 'food_avail_stress', 'caregiver_stress'

### Table 25. Minimum Acceptable Diet P-Values

| p_val | min_accpeptable diet | coef |
|---|---|---|
| 0 | const | -1.3103 |
| 0 | time | -0.7598 |
| 0.001 | counsel_visits | 0.0353 |
| 0 | intensity_percent | 4.3744 |
| 0.001 | cashxcounsel | -0.1463 |
| 0 | age(months) | 0.1329 |
| 0.278 | HH_size | -0.0234 |
| 0 | income_indicator | 0.4266 |
| 0.478 | gender | -0.0755 |
| 0.086 | food_avail_stress | -0.1652 |
| 0.48 | caregiver_stress | -0.0671 |

### Table 26. Caregiver handwashing

| | |
|---|---|
| Interaction coeff (cashxcounsel) | 0.0162 |
| f1_score | 0.8028 |
| accuracy | 0.6761 |
| p-val | 0.771 |
| 0.765576529 | *with treatment* |
| 0.522385026 | *no treatment* |
| **0.243191503** | *incremental effect for 50% additional cash AND 1 counseling visit* |

***Variables included in model:*** 'time', 'counsel_visits', 'intensity_percent', 'cashxcounsel', 'age(months)', 'HH_size', 'income_indicator', 'gender'

### Table 27. Early Breastfeeding (0-23 months)

| | |
|---|---|
| Interaction coeff (cashxcounsel) | -0.0624 |
| f1_score | 0.9243 |
| accuracy | 0.8593 |
| p-val | 0.169 |
| 0.931988901 | *with treatment* |
| 0.852066282 | *no treatment* |
| **0.079922619** | *incremental effect for 50% additional cash AND 1 counseling visit* |

***Variables included in model:*** 'time', 'counsel_visits', 'intensity_percent', 'cashxcounsel', 'age(months)', 'HH_size', 'income_indicator', 'low_bw', 'gender'

### Table 28. Complementary Feeding Initiation (6-8 months)

| | |
|---|---|
| Interaction coeff (cashxcounsel) | 0.0162 |
| f1_score | 0.8028 |
| accuracy | 0.6761 |
| p-val | 0.771 |
| 0.974125948 | *with treatment* |
| 0.862723843 | *no treatment* |
| **0.111402105** | *incremental effect for 50% additional cash AND 1 counseling visit* |

***Variables included in model:*** 'time', 'counsel_visits', 'intensity_percent', 'cashxcounsel', 'age(months)', 'HH_size', 'income_indicator', 'gender'
***Note:*** In both models above, only 'age' was statistically significant.

### Table 29. Recent diarrhoea

| | |
|---|---|
| Interaction coeff (cashxcounsel) | -0.0447 |
| f1_score | 0.271 |
| accuracy | 0.67 |
| p-val | *No p-value; class-weighted logistic regression* |
| 0.388148882 | *with treatment* |
| 0.455319503 | *no treatment* |
| **-0.067170622** | *incremental effect for 50% additional cash AND 1 counseling visit* |

***Variables included in model:*** 'time', 'counsel_visits', 'intensity_percent', 'cashxcounsel', 'age(months)', 'HH_size', 'income_indicator', 'low-bw', 'gender'

### Table 30. Recent respiratory infection

| | |
|---|---|
| Interaction coeff (cashxcounsel) | 0.0777 |
| f1_score | 0.265 |
| accuracy | 0.621 |
| p-val | *No p-value; class-weighted logistic regression* |
| 0.358369044 | *with treatment* |
| 0.458073682 | *no treatment* |
| **-0.099704638** | *incremental effect for 50% additional cash AND 1 counseling visit* |

***Variables included in model:*** 'time', 'counsel_visits', 'intensity_percent', 'cashxcounsel', 'age(months)', 'HH_size', 'income_indicator', 'low_bw', 'gender'

### Table 31. Recent malaria

| | |
|---|---|
| Interaction coeff (cashxcounsel) | 0.0206 |
| f1_score | 0.08 |
| accuracy | 0.641 |
| p-val | *No p-value; class-weighted logistic regression* |
| 0.32845085 | *with treatment* |
| 0.388647726 | *no treatment* |
| **-0.060196876** | *incremental effect for 50% additional cash AND 1 counseling visit* |

***Variables included in model:*** 'time', 'counsel_visits', 'intensity_percent', 'cashxcounsel', 'age(months)', 'HH_size', 'income_indicator', 'low_bw', 'gender'

### Table 32. Health Centre Visits

| | |
|---|---|
| Interaction coeff (cashxcounsel) | -0.0206 |
| f1_score | 0.811 |
| accuracy | 0.685 |
| p-val | 0.574 |
| 0.622753041 | *with treatment* |
| 0.537255821 | *no treatment* |
| **0.085497219** | *incremental effect for 50% additional cash AND 1 counseling visit* |

***Variables included in model:*** 'time', 'counsel_visits', 'intensity_percent', 'cashxcounsel', 'age(months)', 'HH_size', 'income_indicator', 'low_bw', 'gender' ***Note***: Only 'age' was statistically significant.

### Table 33. Routine checkup for child

| | |
|---|---|
| Interaction coeff (cashxcounsel) | -0.1122 |
| f1_score | 0.906 |
| accuracy | 0.832 |
| p-val | 0.064 |
| 0.90259092 | *with treatment* |
| 0.784417883 | *no treatment* |
| **0.118173038** | *incremental effect for 50% additional cash AND 1 counseling visit* |

***Variables included in model:*** 'time', 'counsel_visits', 'intensity_percent', 'cashxcounsel', 'age(months)', 'HH_size', 'income_indicator', 'low-bw', 'gender'

### Table 34. Routine checkup for child P-Values

| p_val | routine checkup for child | coef |
|---|---|---|
| 0 | const | 3.0297 |
| 0.763 | time | -0.0429 |
| 0 | counsel_visits | 0.0583 |
| 0.012 | intensity_percent | 1.8651 |
| 0.064 | cashxcounsel | -0.1122 |
| 0 | age(months) | -0.0964 |
| 0.025 | HH_size | -0.0474 |
| 0.007 | income_indicator | 0.2096 |
| 0.056 | low_bw | 0.41 |
| 0.082 | gender | -0.1814 |

### Table 35. Caregiver stress

| | |
|---|---|
| Interaction coeff (cashxcounsel) | 0.0225 |
| f1_score | 0.242 |
| accuracy | 0.644 |
| p-val | *No p-value; class-weighted logistic regression* |
| 0.468989852 | *with treatment* |
| 0.610234968 | *no treatment* |
| **-0.141245115** | *incremental effect for 50% additional cash AND 1 counseling visit* |

***Variables included in model:*** 'time', 'counsel_visits', 'intensity_percent', 'cashxcounsel', 'age(months)', 'HH_size', 'income_indicator', 'low-bw', 'gender'

### Table 36. Caregiver happiness

| | |
|---|---|
| Interaction coeff (cashxcounsel) | -0.0288 |
| f1_score | 0.0732 |
| accuracy | 0.65 |
| p-val | 0.391 |
| 0.314858943 | *with treatment* |
| 0.341144072 | *no treatment* |
| **-0.026285129** | *incremental effect for 50% additional cash AND 1 counseling visit* |

***Variables included in model:*** "time', 'counsel_visits', 'intensity_percent', 'cashxcounsel', 'age(months)', 'HH_size', 'income_indicator', 'low-bw', 'gender'

### Table 37. caregiver happiness p-values

| p_val | caregiver happiness | coef |
|---|---|---|
| 0 | const | -0.7193 |
| 0.865 | time | -0.0187 |
| 0.007 | counsel_visits | 0.0229 |
| 0.656 | intensity_percent | -0.2556 |
| 0.391 | cashxcounsel | -0.0288 |
| 0.299 | age(months) | 0.0059 |
| 0.065 | HH_size | -0.0325 |
| 0.035 | income_indicator | 0.1234 |
| 0.509 | low_bw | 0.1102 |
| 0.698 | gender | 0.0323 |

### Table 38. Food availability stress

| | |
|---|---|
| Interaction coeff (cashxcounsel) | 0.0071 |
| f1_score | 0.272 |
| accuracy | 0.64 |
| p-val | *No p-value; class-weighted logistic regression* |
| 0.492238124 | *with treatment* |
| 0.493400383 | *no treatment* |
| **-0.00116226** | *incremental effect for 50% additional cash AND 1 counseling visit* |

***Variables included in model:*** 'time', 'counsel_visits', 'intensity_percent', 'cashxcounsel', 'age(months)', 'HH_size', 'income_indicator', ‘low-bw’, 'gender'

### Table 39. Sanitary disposal of children's stool

| | |
|---|---|
| Interaction coeff (cashxcounsel) | -0.1362 |
| f1_score | 0.941 |
| accuracy | 0.889 |
| p-val | 0.042 |
| 0.93670132 | *with treatment* |
| 0.873603189 | *no treatment* |
| **0.063098132** | *incremental effect for 50% additional cash AND 1 counseling visit* |

***Variables included in model:*** 'time', 'counsel_visits', 'intensity_percent', 'cashxcounsel', 'age(months)', 'HH_size', 'income_indicator', 'age_of_caregiver'

### Table 40. Sanitary disposal of children's stool p-values

| **p_val** | **caregiver happiness** | **coef** |
|---|---|---|
| 0 | const | -0.7193 |
| 0.865 | time | -0.0187 |
| 0.007 | counsel_visits | 0.0229 |
| 0.656 | intensity_percent | -0.2556 |
| 0.391 | cashxcounsel | -0.0288 |
| 0.299 | age(months) | 0.0059 |
| 0.065 | HH_size | -0.0325 |
| 0.035 | income_indicator | 0.1234 |
| 0.509 | low_bw | 0.1102 |
| 0.698 | gender | 0.0323 |

### Table 41. Dietary diversity of caregiver

| | |
|---|---|
| Interaction coeff (cashxcounsel) | -0.0902 |
| f1_score | 0.364 |
| accuracy | 0.615 |
| p-val | 0.003 |
| 0.490001333 | *with treatment* |
| 0.331501903 | *no treatment* |
| **0.15849943** | *incremental effect for 50% additional cash AND 1 counseling visit* |

***Variables included in model:*** 'time', 'counsel_visits', 'intensity_percent', 'cashxcounsel', 'age(months)', 'HH_size', 'income_indicator', 'gender'

### Table 42. Dietary diversity of caregivers p-values

| **p_val** | **dietary diversity of caregiver** | **coef** |
|---|---|---|
| 0.613 | const | 0.0819 |
| 0 | time | -0.65 |
| 0 | counsel_visits | 0.0287 |
| 0.003 | intensity_percent | 1.3556 |
| 0.003 | cashxcounsel | -0.0902 |
| 0.259 | age(months) | -0.0054 |
| 0.001 | HH_size | -0.0499 |
| 0 | income_indicator | 0.2821 |
| 0.27 | gender | 0.0804 |

### Table 43. Complete immunisation

| | |
|---|---|
| Interaction coeff (cashxcounsel) | -0.0051 |
| f1_score | 0.82 |
| accuracy | 0.766 |
| p-val | 0.899 |
| 0.350361631 | *with treatment* |
| 0.319972105 | *no treatment* |
| **0.030389526** | *incremental effect for 50% additional cash AND 1 counseling visit* |

***Variables included in model:*** 'time', 'counsel_visits', 'intensity_percent', 'cashxcounsel', 'age(months)', 'HH_size', 'income_indicator', 'low-bw', 'gender'

### Table 44. Complete immunisation p-values

| **p_val** | **complete immunisation** | **coef** |
|---|---|---|
| 0 | const | -2.1507 |
| 0.261 | time | 0.1283 |
| 0.247 | counsel_visits | 0.0122 |
| 0.697 | intensity_percent | 0.2536 |
| 0.899 | cashxcounsel | -0.0051 |
| 0 | age(months) | 0.1842 |
| 0.002 | HH_size | -0.0594 |
| 0 | income_indicator | 0.4026 |
| 0.318 | low_bw | 0.1849 |
| 0.584 | gender | 0.051 |

### Table 45. Water treated for drinking (not taking into account distance within 30 mins)

| | |
|---|---|
| Interaction coeff (cashxcounsel) | -0.1255 |
| f1_score | 0.148 |
| accuracy | 0.702 |
| p-val | 0.002 |
| 0.590008375 | *with treatment* |
| 0.19358216 | *no treatment* |
| **0.396426216** | *incremental effect for 50% additional cash AND 1 counseling visit* |

***Variables included in model:*** 'time', 'counsel_visits', 'intensity_percent', 'cashxcounsel', 'age(months)', 'HH_size', 'income_indicator'

### Table 46. Water treated for drinking water p-values

| **p_val** | **Water treated for drinking (not taking into account distance within 30 mins)** | **coef** |
|---|---|---|
| 0 | const | -1.7274 |
| 0.081 | time | -0.1742 |
| 0 | counsel_visits | 0.0497 |
| 0 | intensity_percent | 3.6079 |
| 0.002 | cashxcounsel | -0.1255 |
| 0.828 | HH_size | -0.0036 |
| 0 | income_indicator | 0.5035 |

### Table 47. Improved sanitation facilities

| | |
|---|---|
| Interaction coeff (cashxcounsel) | 0.0029 |
| f1_score | 0.842 |
| accuracy | 0.728 |
| p-val | 0.949 |
| 0.641768909 | *with treatment* |
| 0.508649137 | *no treatment* |
| **0.133119772** | *incremental effect for 50% additional cash AND 1 counseling visit* |

***Variables included in model:*** 'time', 'counsel_visits', 'intensity_percent', 'cashxcounsel', 'age(months)', 'HH_size', 'income_indicator'

**Note:** Only income indicator is statistically significant, but strongly so (p=0, coefficient = .7927)

### Table 48. Household handwashing facilities

| | |
|---|---|
| Interaction coeff (cashxcounsel) | -0.21 |
| f1_score | 0.089 |
| accuracy | 0.709 |
| p-val | *No p-value; class-weighted logistic regression* |
| 0.555520111 | *with treatment* |
| 0.260571557 | *no treatment* |
| **0.294948554** | *incremental effect for 50% additional cash AND 1 counseling visit* |

***Variables included in model:*** 'time', 'counsel_visits', 'intensity_percent', 'cashxcounsel', 'age(months)', 'HH_size', 'income_indicator'

## PREGNANT WOMEN

### Table 49. Dietary diversity of pregnant women

| | |
|---|---|
| Interaction coeff (cashxcounsel) | -0.8589 |
| f1_score | 0.72 |
| accuracy | 0.61 |
| p-val | 0.481 |
| 0.651740821 | *with treatment* |
| 0.328296469 | *no treatment* |
| **0.323444352** | *incremental effect with nutritional counseling received (from one source)* |

***Variables included in model:*** 'time', 'counsel_visits', 'intensity_percent', 'cashxcounsel', 'age(years)', 'HH_size', 'income_indicator', 'trimester'

### Table 50. Routine ANC

| | |
|---|---|
| Interaction coeff (cashxcounsel) | n/na |
| f1_score | 0.821 |
| accuracy | 0.815 |
| p-val | n/na |
| 0.583303623 | *with treatment* |
| 0.173969744 | *no treatment* |
| **0.409333878** | *incremental effect with nutritional counseling received (from one source)* |

***Variables included in model:*** 'time', 'counsel_visits', 'intensity_percent', 'cashxcounsel', 'age(years)', 'HH_size', 'income_indicator', 'gender', 'trimester'

**Table 51. Deliver in health facility**

| | |
|---|---|
| Interaction coeff (cashxcounsel) | n/na |
| f1_score | 0.816 |
| accuracy | 0.7 |
| p-val | *No p-value; class-weighted logistic regression* |
| 0.998317852 | *with treatment* |
| 0.880902032 | *no treatment* |
| **0.11741582** | *incremental effect with nutritional counseling received (from one source)* |

***Variables included in model:*** 'time', 'counsel_visits', 'intensity_percent', 'cashxcounsel', 'age(years)', 'HH_size', 'trimester'

# ANNEX 10. FGDS AND IDIS WITH NICHE BENEFICIARIES

## FGDS

Table 49 provides the details of the participants of the seven FGDs undertaken in June 2018. A total of 52 community members participated in the FGDs: 28 caregivers and 24 pregnant women. The FGD participants' ages ranged between 20 and 65 years, and the most common livelihood was farming.

**Table 52. Characteristics of FGD participants**

| FGD | Pregnant/ Caregiver during survey | Age | Disability | Livelihood | House hold size | FHH/ MHH | Location |
|---|---|---|---|---|---|---|---|
| 1. Pregnant women, Kitui West, January cohort | Pregnant woman | 33 | None | Farmer | 5 | MHH | Mutonguni |
| | Pregnant woman | 27 | None | Farmer | 9 | MHH | Mangelu |
| | Pregnant woman | 29 | None | Farmer | 7 | MHH | Mangelu |
| | Pregnant woman | 22 | None | Farmer | 5 | MHH | Usiani |
| | Pregnant woman | 26 | None | Farmer | 8 | MHH | Kithumula |
| | Pregnant woman | 26 | None | Farmer | 5 | MHH | Kakumuti |
| 2. Mixed group (caregivers and pregnant women), Kitui West, January cohort | Caregiver | 24 | None | Farmer | 5 | MHH | Kathangathini |
| | Caregiver | 25 | None | Farmer | 10 | MHH | Katutu |
| | Caregiver | 31 | None | Farmer | 7 | MHH | Kiseveni |
| | Caregiver | 40 | None | Farmer | 8 | FHH | Kiseveni |
| | Caregiver | 65 | None | Farmer | 9 | MHH | Kitamwiki |
| | Pregnant woman | 29 | None | Farmer | 5 | MHH | Katheka |
| | Caregiver | 26 | None | Farmer | 6 | MHH | Senda |
| | Caregiver | 44 | None | Farmer | 10 | MHH | Kiseveni |
| | Caregiver | 23 | None | Farmer | 14 | FHH | Kalinditi |
| | Pregnant woman | 20 | None | Farmer | 4 | MHH | Katutu |
| 3. Mixed group (caregivers and pregnant women), Kitui Central, January cohort | Pregnant woman | 21 | None | Farmer | 7 | FHH | Kyangwithya West |
| | Caregiver | 30 | None | Farmer | 9 | MHH | Mulango |
| | Pregnant woman | 24 | None | Farmer | 12 | MHH | Kyangwithya East |
| | Pregnant woman | 23 | None | Farmer | 6 | MHH | Kyangwithya East |
| 4. Mixed group (caregivers and pregnant women), Kitui Central, | Caregiver | 55 | None | Farmer | 4 | FHH | Mulango |
| | Pregnant woman | 23 | None | Farmer | 6 | FHH | Kyangwithya West - Mulutu |
| | Caregiver | 23 | None | Farmer | 7 | FHH | Mulango |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| January cohort | Caregiver | 26 | None | Farmer | 11 | MHH | Tungutu |
| | Pregnant woman | 41 | Physically impaired | Businesswoman | 11 | FHH | Kyangwithya East - Mutune |
| | Pregnant woman | 23 | None | Student | 5 | FHH | Musene |
| | Caregiver | 20 | None | None | 4 | FHH | Mulango |
| | Caregiver | 31 | None | Farmer | 9 | MHH | Kyangunga |
| | Caregiver | 38 | None | Farmer | 7 | MHH | Mulango |
| 5. Mixed group (caregivers and pregnant women), Matungulu and Kangundo, October cohort | Caregiver | 24 | None | Farmer | 6 | FHH | Matungulu |
| | Pregnant woman | 21 | None | Farmer | 10 | FHH | Tala |
| | Pregnant woman | 20 | None | Farmer | 14 | FHH | Tala |
| | Pregnant woman | 27 | None | Businesswoman | 7 | FHH | Kangundu |
| | Pregnant woman | 30 | None | Farmer | 10 | FHH | Kivaani |
| | Pregnant woman | 21 | None | Farmer | 10 | MHH | Tala |
| | Pregnant woman | 20 | None | Businesswoman | 7 | MHH | Tala |
| 6. Caregivers, Matungulu and Kangundo, October cohort | Caregiver | 32 | None | Farmer | 8 | MHH | Tala |
| | Caregiver | 35 | None | Farmer | 10 | FHH | Tala |
| | Caregiver | 30 | None | Casual labour | 5 | FHH | Tala |
| | Caregiver | 20 | None | Farmer | 7 | MHH | Tala |
| | Caregiver | 24 | None | None | 5 | FHH | Tala |
| | Caregiver | 28 | None | Farmer | 6 | FHH | Tala |
| 7. Mixed group (caregivers and pregnant women), Kathiani, October cohort | Caregiver | 62 | None | Farmer | 12 | FHH | Kathiani |
| | Caregiver | 49 | None | Farmer | 9 | MHH | Kathiani |
| | Pregnant woman | 24 | None | Casual labour | 6 | FHH | Mitaboni |
| | Caregiver | 26 | None | Farmer | 15 | FHH | Kathiani |
| | Pregnant woman | 22 | None | Farmer | 9 | FHH | Kathiani |
| | Caregiver | 25 | None | Farmer | 7 | MHH | Kathiani |
| | Pregnant woman | 24 | None | Farmer | 5 | FHH | Kathiani |
| | Pregnant woman | 32 | None | Casual labour | 10 | FHH | Mitaboni |
| | Caregiver | 22 | None | Farmer | 6 | MHH | Kathiani |
| | Caregiver | 26 | None | Businesswoman | 3 | MHH | Kathiani |

Table 53 presents a summary of the results of the seven FGDs conducted with NICHE beneficiaries. Particularly illustrative narratives are provided to support the FGD findings. These narratives are attributed to individuals using key criteria including their age, location

and disability (if any). Unless otherwise stated, all FGD participants were farmers and from a male-headed household.

**Table 53. Summary of FGD proceedings**

| **FGD 1. Pregnant women, Kitui West, January cohort** |
|---|
| **Overview of participants:** This FGD was held with a group of 6 women who had been pregnant during the survey, living in Kitui West. Participants' ages ranged from 22 to 33. Participants came from Kakumuti, Kithumula, Kwamumo, Mangelu, Mutonguni, and Usiano. None were disabled and none were part of female-headed households (FHH). All of them were farmers.<br><br>**Effectiveness of implementation:** Participants reported that the person who had originally signed up for the CT-OVC programme, usually a senior female figure, was responsible for collecting the cash. Participants reported that biggest problem they had was with delays in receiving the cash, which they thought was due to technical problems and the fact that the county population was large. One respondent also said that they sometimes arrived at the bank to find the ATMs were not working so they had to come back over several days. They were not contacted when the money had arrived in their account, and some people who lived in more remote locations had difficulties getting to the bank to collect their cash.<br><br>All respondents had received CHV visits, but their visits were inconsistent, sometimes once a month, and sometimes bi-monthly. CHV visits tended to last around two hours.<br><br>*"Those who receive the money, sometimes they can go to the ATM and they are not working, they have to keep going there to get the money over two or three days."* (pregnant woman, 27, farmer, Mangelu, Kitui West)<br><br>**Relevance:** Participants reported that the amount of additional cash was not enough to meet their nutritional needs and other items for their children. They noted that they had been advised to buy a chicken with the cash top-up; however, as chickens cost around 700 Ksh, the additional cash was not enough to purchase one. They added that, due to the dry climate of the area, it was difficult for them, being farmers, to find other ways of earning money.<br><br>All participants agreed that the information provided in the nutritional counselling was relevant and useful. They could not think of any other information that would have been useful. Participants reported that they had been advised to use the additional cash top-up to buy a hen, and use the eggs to feed their children and ensure a balanced diet. They reported that CHVs had checked if they had bought a hen when they visited, and the participants were glad to get these visits as they appreciated being followed up.<br><br>*"We get 500 Ksh per month, and when you get 500 Ksh per month, you can't get anything. For example, you have a small baby, for your baby you want diapers, you want one packet it costs 250 Ksh. You want to buy like a hen, a hen is like 700 Ksh, so* [the top-up] *is very little for us to manage."* (pregnant woman, 29, farmer, Mangelu, Kitui West)<br><br>*"The money can't even make it for one day. Even they can consume that in one day, in one meal. In our families, we are large, even nine people. Five hundred for nine people is not enough."* (pregnant woman, 27, farmer, Mangelu, Kitui West)<br><br>**Positive change:** Participants reported that they usually decided how the cash was spent. While they reported that they prioritised spending on food, some reported that they had spent the money on non-food items, such as household items and also mentioned that they hoped to be able to use the cash to engage in different livelihood activities. Fruits were reported to be expensive, as they did not grow everywhere and had to be bought from the markets. People's main source of food depended on the season: in the dry season, when food was hard to grow due to lack of rain, participants reported spending more money on grains, flour and other food items in the markets. Participants reported that they grew maize, beans, green grams and cowpeas, all for subsistence as their kitchen gardens were small and they could not grow large quantities. Participants said they mostly ate ugali, rice and grains. |

Participants said they had learned a lot and gave examples of information they had learned regarding sanitation and hygiene, maternal nutrition, and a balanced diet for babies. They reported having changed their behaviours, such as changing how they cooked for their babies, and boiling water, and had seen positive changes as a result, such as preventing diseases like typhoid by boiling water.

*"For example, we have been given information about hygiene, like when you visit the toilet and washroom you have to wash your hands using soap and water, when you are changing your baby, afterwards you have to use water with soap."* (pregnant woman, 22, farmer, Usiani, Kitui West)

*"About nutritional counselling,* [the CHVs] *were also advising the mothers, the lactating mothers, about how they could balance the food for the young babies so that it can be well-balanced, and of the nutritional value for the baby."* (pregnant woman, 33, farmer, Mutonguni, Kitui West)

*"There are improvements in eating habits. Before the advice from the nutritional counselling, we didn't know how to mix the food for balanced diet, we didn't know which ones to feed before their diet. Now we know how to cook and mix foods."* (pregnant woman, 26, farmer, Kakumuti, Kitui West)

**Challenges and constraints:** Participants reported that while some behavioural changes were easy to implement, others, particularly dietary changes, were more challenging as they required resources that participants did not have. Participants reported that the major constraints they had to acting on the advice of the nutritional counselling was too little cash or delays in the transfer. Participants also mentioned that while they had all heard advice about pregnant women needing iron, they did not have the money to buy iron-rich foods. There were no problems with health centres running out of IFAS, but it was difficult to access them because some households were located far from health centres, and had to pay 150 or 200 Ksh for a *boda-boda* (motorbike) to get there.

"*Some ideas are very easy to implement like boiling water and cooking but when it comes to other activities, like planting vegetables, due to shortage of water. So we are hoping, if you can think of supplying water like in tanks, that can help us a lot."* (pregnant woman, 33, farmer, Mutonguni, Kitui West)

*"With the nutritional counselling, the volunteers go around, giving us advice… but the problem is cash. We are given the advice and the cash can be delayed or very little. So we suggest if there can be an addition of the cash."* (pregnant woman, 22, farmer, Usiani, Kitui West)

**Suggestions for improvement:** Regarding the programme, respondents all thought that receiving the money through M-Pesa would be better. They requested that the problems of delays were overcome and that they were provided with more cash in order to be able to invest in other livelihood activities and earn money to act on the nutritional messages they received. They also reported that they would like CHVs to visit more frequently in order to learn more, so that CHVs could monitor the progress of their family's health. They also reported that additional agricultural and livelihood support would help them.

*"We hope that the volunteers can come around more often, so we can get more ideas on the nutritional counselling."* (pregnant woman, 22, farmer, Usiani, Kitui West)
*"We are hoping to do those activities like keeping poultry, and growing vegetables, because if we are getting this and it does well, we can sell and get a lot of money and we can improve our living standards, we can educate our young ones, we can buy some things for the household."* (pregnant woman, 33, farmer, Mutonguni, Kitui West)

*"I propose they can visit us on weekly basis so they can even check the young ones, how they are doing… considering that we have our own other businesses and families to take care of, one time per week is enough."* (pregnant woman, 26, farmer, Kithumula, Kitui West)

**FGD 2. Mixed group (caregivers and pregnant women), Kitui West, January cohort**

**Overview of participants:** This FGD was held with a group of 10 women (eight caregivers and two women who had been pregnant during the survey), living in Kitui West. Participants' ages ranged from 20 to 65. Participants

came from Kitamwiki, Kiseveni, Katutu, Kathangathini, Katheka, Senda, and Kalinditi. None were disabled and two were part of FHHs. All of them were farmers.

**Effectiveness of implementation:** Participants reported money was picked up from the bank by the person who signed up for the programme, who tended to be a senior female member of the household, such as a mother-in-law or grandmother. The biggest problem they had with receiving the cash was that they did not have any communication from the bank or implementers about when the money was deposited. They relied on hearing through other beneficiaries when it had arrived. They reported that although they did not experience any days, they were sometimes unable to collect it on the day they went to the bank due to the bank being crowded.

Participants reported that they received weekly visits from CHVs, and that they generally stayed for around 30 minutes. Participants were happy with the frequency and duration of the visits, but reported that communication was a problem, as CHVs did not visit regularly on the same day of the week, and did not alert households to when they would be coming.

*"For example, those community health workers, they come on Monday, skip a day and come on Wednesday. Another week they come on Tuesday, they come on Friday, so there is regular visits but different days. There is no regular and specific day."* (caregiver, 40, farmer, FHH, Kiseveni, Kitui West)

**Relevance:** Participants reported that the cash was useful as it helped them cover costs, particularly those for food and education. However, they reported that the cash was not sufficient. For example, participants noted that they had been advised to buy a hen to provide eggs with which to feed their families, but the additional money received was barely enough to cover the cost of a hen so participants had little left after this purchase.

Participants reported that the nutritional counselling was useful, as it had taught them lots of new information. Participants could not think of other information they would like to be taught, but said they were open to and happy to be taught new information. One suggested that the programme could teach beneficiaries how to work as a team to support each other using cash from the programme.

*"The cash has helped us a lot, because we can acquire what we didn't have in our families. This is an advantage to us because before the programme, you would find there are some difficulties, we wanted to get something but we couldn't because of money shortages."* (caregiver, 24, farmer, Kathangathini, Kitui West)

*"We did not how to bring up our children in cooking, so nowadays we are able to give our families a balanced diet."* (caregiver, 26, farmer, Senda, Kitui West)

*"We used to give our young kids food at the age of three months, but after we were educated, we were able to understand that you have to breastfeed a child for six months and then learned how to give them the food."* (caregiver, 44, farmer, Kiseveni, Kitui West)

**Positive change:** Most participants reported that the person who receives the money from the bank decides how the cash is spent, but one said that her husband decides how money is spent in her household. Participants said that the cash had benefited them, and reported that they had used the cash on school costs, food and clothes for children, and hens with which to get eggs, which they were advised to do by CHVs. One participant, also reported spending the money on hospital bills for their disabled child.

Participants reported that the nutritional counselling had taught them many things, such as hand washing, sanitation, agricultural practises, taking children to clinics and feeding their young children, including about portions. They gave examples of how they had put the advice into practise and said they had noticed benefits, including saving money by growing their own vegetables, and decreased illness.

*"When* [the CHVs] *went to my place, I didn't have a pit latrine. Then they told me about hygiene. After that, we put into practise what we were told about the hygiene. Previously we had some issues of diseases and health, but after that we are comfortable, no diseases, no problems when it comes to health. I didn't know how to give young ones*

*balanced diet and how to cook for them. Then my home received peace - I talk of peace, because before they kept complaining of health problems, we were going to the hospital with problems, and now we have peace after we were chosen to join the programme."* (caregiver, 44, farmer, Kiseveni, Kitui West)

*"I have benefitted a lot in this project. Now I get the money, I am able to buy fruits for the disabled child and the remainder I take for school fees."* (caregiver, 40, farmer, FHH, Kiseveni, Kitui West)

*"They taught us things like practising nursery beds, and through this we are able to get vegetables from our own lands, and also it has saved money."* (caregiver, 26, farmer, Senda, Kitui West)

**Challenges and constraints:** Participants said that some activities had been easy to put into practise, such as boiling water to purify it. However, planting a nursery garden was more challenging because of the costs of buying materials from the agrovet, and seedlings.

**Suggestions for improvement:** Participants said they would prefer that cash was transferred to them through M-Pesa, as it would be possible for them to access the money without travelling to the bank. They also reported the need to increase the amount of the cash transfer so it would cover all the costs of children. Participants also mentioned that they would appreciate agricultural assistance which could help them bring up their children, including animals for farming and carrying water, and water for the dry season. They noted that individual household tanks would be preferable to communal farms and tanks, as it would evade the possibility of conflict and competition over water. Another, who had a disabled child in their household, reported a need for additional support for disabled children, including help at schools and mobility aids.

*"It would be good if they can bring some help in some areas. For example, we basically depend on farming and we use livestock for farming – I propose we be supported to buy cows and donkeys so they can support us for farming. Through this, we could be assisted much when it comes to bringing the young ones."* (caregiver, 65, farmer, Kitamwiki, Kitui West)

*"Most of us don't have water harvesting for the rainy season, so we are hoping for the promotion of water tanks for this."* (caregiver, 26, farmer, Senda, Kitui West)

*"When there is someone in the household with disabilities, the disabled children mostly stay at home because they have to be in touch with the carers… so they should be promoted with wheelchairs and be supported in education."* (caregiver, 40, farmer, FHH, Kiseveni, Kitui West)

*"I anticipate that this programme can add some cash because the little we are getting cannot manage to cater for everything in the household. Apart from the food, the children also have other requirements, they need clothes and education and other things."* (caregiver, 44, farmer, Kiseveni, Kitui West)

**FGD 3. Mixed group (caregiver and pregnant women), Kitui Central, January cohort**

**Overview of participants:** This FGD was held with a group of four women (one caregiver and three women who had been pregnant during the survey), living in Kitui Central. Participants' ages ranged from 21 to 30. Participants came from Kyangwithya East, Kyangwithya West and Mulangu. None were disabled and one was part of an FHH. All of them were farmers.

**Effectiveness of implementation:** Participants reported that the person in the household who signed up for the CT-OVC programme collected the cash on behalf of the family. They did not report any delays in receiving it. However, they reported that congestion at the bank was a problem and as a result some people who went to the bank were unable to collect their cash. Another issue raised was that beneficiaries were not alerted when the money had been deposited in their accounts, although one participant reported that the local chairman would contact people by phone when the money was distributed. One reported that she had never received the cash she was entitled to.

Participants all reported that they had received visits from CHVs, who came twice a week and stayed between 30 minutes and an hour. They reported they were comfortable with the length and frequency of the CHVs' visits.

*"Last month I never received the cash [CT-OVC and additional cash]. I was told there was no money in my account so even if I swiped the card there was no money. We complained to the people who go around and the bank but they are still doing follow-up until today."* (pregnant woman, 23, farmer, Kyangwithya East, Kitui Central)

**Relevance:** Participants reported that the cash top-up was useful because it was helping them bring up their children. However, most noted that the money was not enough to implement all the changes they wanted to.

Participants said that the advice they received from the CHVs was very useful and they had learned a lot. The topics they reported receiving information about included a balanced diet, how to feed young babies, IFAS supplements, hygiene, and breastfeeding. Women who had been pregnant during the survey reported finding information related to breastfeeding and hygiene most relevant. Participants also reported they had been taught about budgeting, and recommended the programme be extended so this information was made available to others. They did not suggest any other topics that they felt they should have been taught about.

*"In my opinion, the programme should be ongoing, because the advice we have received has helped us… by now, we also know how to budget money."* (caregiver, 30, farmer, Mulango, Kitui Central)

*"There are changes* [due to the programme] *because with it we are able to manage our small children, but 500 or 1,000 Ksh can only cater for them for two weeks."* (caregiver, 30, farmer, Mulango, Kitui Central)

**Positive change:** Respondents reported that they spent the additional cash on food and clothes for their children, particularly on the youngest infants for women who had been pregnant. They usually spent the money immediately after receiving it and bought food in bulk. However, if it was harvest season, they would save the money and use it when they needed it. During the dry season, they spent more money on food and vegetables in the markets. Prices for food items in the markets were reported to be higher during the dry season, but one participant noted that even when market prices for food were high, they still spent some of the money on school fees.

Respondents said they had learned a lot from the CHV visits and felt that their knowledge had increased. Among the behaviours participants reported changing in response to CHV advice were hygiene behaviours such as cleaning the compound, handwashing, and women who had been pregnant during the CHV visits reported they had started exclusive breastfeeding for 6 months and taking IFAS during the pregnancy. They reported no problems in collecting and taking IFAS. Participants reported that they had seen improvements in their health and that of their children after following the CHVs' advice. They also reported being able to save money on vegetables, as the CHVs had advised them to plant vegetables. As a result, they now mostly spent money on additional grains or foods they could not grow, and school fees.

*"I buy food for my young baby, in particular beans, matoke, clothes, and some proteins like eggs, rice. When it comes to vegetables, I buy spinach, sukuma wiki, and other foodstuffs to make sure I give the baby a well-balanced diet."* (caregiver, 30, farmer, Mulango, Kitui Central)

*"It depends on the season - if there is foodstuffs in the homestead, they give us the money and we just save it and use once in a while."* (pregnant woman, 24, farmer, Kyangwithya East, Kitui Central)

*"Before they came and told me, I didn't know about hygiene, I could spend the whole day without sweeping my compound, but now I know about hygiene I can wake up every day and I sweep the compound. Other areas about hygiene, when I visit the washroom I know I have to wash my hands using soap and clean water… I have put up jerry cans so that other people in my household can wash their hands… We have changed a lot because before we could become sick from things that we didn't know."* (caregiver, 30, farmer, Mulango, Kitui Central)

*"The best bit for me was that about hygiene and breastfeeding the baby for six months and eliminating diseases. I have changed what I do because I breastfeed my baby for six months, something I didn't do before."* (pregnant woman, 21, farmer, FHH, Kyangwithya West, Kitui Central)

*"Since I received the money, I have seen changes when it comes to the health of the baby. In those days, when my baby attended the clinic, she was just cutting weight and cutting weight, not gaining, but nowadays she is in good health, she has improved and gained weight."* (caregiver, 30, farmer, Mulango, Kitui Central)

**Challenges and constraints:** Some participants reported that it had been difficult for them to grow vegetables due to problems accessing water, although this varied depending on the water availability in the area. One reported that she had tried to dig a borehole, but did not have the money to set up a well to access the water at the bottom. By contrast, another reported that planting vegetables for her had been easy as her area had better water availability and the CHVs had taught her how to plant vegetables.

**Suggestions for improvement:** Most participants reported that the amount of cash should be increased, and agreed that they should receive another 500 Ksh per child per month. While most generally agreed that M-Pesa would be a better way to receive money, one participant cautioned that some beneficiaries did not have a phone. All participants said they would prefer to receive money every month, rather than on a bi-monthly basis.

**FGD 4. Mixed group (caregivers and pregnant women), Kitui Central, January cohort**

**Overview of participants:** This FGD was held with a group of nine women, six caregivers and three women who had been pregnant during the survey, living in Kitui Central. Participants' ages ranged from 20 to 55. Participants came from Kyangunga, Kyangwithya East, Kyangwithya West, Mulango, Musene, and Tungutu. One was disabled and had a physical impairment. Six came from FHHs. Six were farmers, one was a businesswoman, one was a student, and one had no livelihood.

**Effectiveness of implementation:** Most participants said that the mother in the household collected the money, but for a minority, the husband was responsible. They said that they received no communication about when the cash was distributed from the bank or implementers, and only sometimes heard this news from other beneficiaries. As a result, people sometimes went to the bank only to return home empty-handed. This was a particular problem for those who lived far away and had to pay for transport to get to the bank. One participant, who had been pregnant during the study, reported that although she had twins, she only received money for one child, and though she had reported this issue to CHVs, she had received no response.

Participants reported that CHVs visited them two times a week, and their visits lasted for three hours. When CHVs arrived, participants said they called other family members to hear the advice.

*"I come from a long distance, from where I have to pay 100 Ksh… Sometimes I arrive at the bank and I find* [the money] *was not distributed in the account so I can't get it at that time."* (caregiver, 55, farmer, FHH, Mulango, Kitui Central)

**Relevance:** Participants reported that the cash was useful, and two noted that they had used the CT-OVC cash to make improvements in their home, including building a better house and buying a mattress.

Participants reported that the information they received from the CHVs was useful and new to them. They did not have any suggestions for any additional topics they would have liked to be trained on.

**Positive change:** Participants reported having learned a lot, and the advice they reported hearing included information on hygiene, latrines, handwashing, feeding young children, breastfeeding, and taking children and babies to the clinic. When asked what they thought were the best or most useful pieces of information they had been given, the most commonly reported answers were hygiene, breastfeeding, having a balanced diet and how to feed babies – there was no marked difference between responses from pregnant women and caregivers. Participants reported they had put the advice into practise: all of them had started planting vegetables, and several gave examples of how they had changed their feeding behaviours to more nutritious ones and had seen health benefits as a result, including increased weight gain for children. They had also started boiling water before using it, which had been easy for them to start doing.

Participants reported that they spent the money immediately after collecting the cash. All participants reported that they discussed what to buy with their families and came to a communal decision. Money was spent on school fees and foodstuffs. Participants reported being conscious about meal planning and buying age-appropriate food for children. Participants also spent money on buying seedlings for their kitchen gardens. They reported that spending patterns varied depending on the season, with less being spent on food during harvest time and more going towards school fees and buying other household assets, such as livestock.

*"Previously I could give them porridge throughout the day, or throughout the day it would be ugali. Nowadays we mix the food with proteins and some fruits."* (pregnant woman, 23, farmer, FHH, Kyangwithya West - Mulutu, Kitui Central)

*"Previously we could mix milk and porridge and give the child at the same time but now we are advised first you give porridge and afterwards you give milk… the main reason why we have to give it at a different time is because milk boils faster than porridge, and if the milk boils too much the nutrients will go."* (pregnant woman, 41, physically impaired, businesswoman, FHH, Kyangwithya East - Mutune, Kitui Central)

*"The information was useful to me in that previously we used to just feed our babies but there was no addition of weight, but nowadays due to the well-balanced diet and the advice we have, the babies are in good health and they keep on gaining weight."* (caregiver, 38, farmer, Mulango, Kitui Central)

*"In my case, after we receive the money, we sit down as a family, we decide of the budget we have, then we start using the money. For example, if we have no food at home, we decide what to buy, such as if it is oil, and which quantity."* (pregnant woman, 23, farmer, FHH, Kyangwithya West - Mulutu, Kitui Central)

*"*[We spend the money on] *Buying fruits, the right food, depending with the age of the child. There is the small garden where we plant vegetables, so if there are no vegetables, we also use the money to buy some seedlings."* (pregnant woman, 41, physically impaired, businesswoman, FHH, Kyangwithya East - Mutune, Kitui Central)

*"During the time of harvesting, we don't spend much on food. We can buy something like a hen for the child, or clothes or other things, or put it towards the school fees."* (caregiver, 20, no livelihood, FHH, Mulango, Kitui Central)

**Challenges and constraints:** Participants reported that accessing water was a major problem for producing their own food in kitchen gardens. They mostly collected water from the river, which was far from their homes, as though there were communal water points, people had to pay for water from these (10 Ksh and 50 Ksh for 20 litres in the wet and dry season respectively). However, when the river dried up in the dry season, they were forced to buy water from the taps. Rainwater harvesting was difficult as many did not have tanks, and even those that did only had small tanks. Participants also reported that prices varied hugely depending on the season, and were much higher during the dry season when they relied more on buying food from the market. For example, 1 kilogram of beans cost 100 Ksh in the rainy season, but dropped to 30 Ksh in the wet season. Similarly, when tomatoes were in season, three could be bought for 20 Ksh, but when not in season, a single tomato could cost 10 Ksh. Participants also reported that getting to health centres to take their children for health check-ups and to collect IFAS and vitamin A supplements was challenging for some who lived far away from heath centres, as they either had to walk long distances or pay for *boda-bodas.*

**Suggestions for improvement:** Participants reported that they would prefer to receive money monthly rather than bi-monthly. They also said they thought it would be better to send the money via M-Pesa due to the costs of transportation to the bank to pick it up. They suggested that the top-up be increased, and one participant suggested 1,500 Ksh per child per month. Another voiced appreciation for the meeting and suggested that they could be visited more often to see how they were progressing and discuss their challenges. Participants also suggested improving their access to water, such as by receiving water from taps for free and setting up taps for household use.

*"If we can be sent the money via M-Pesa it will be much more effective, because if we have to come to get the money from the bank we have to spend some on transport."* (pregnant woman, 23, student, FHH, Musene, Kitui Central)

**FGD 5. Mixed group (caregiver and pregnant women), Matungulu and Kangundo, October cohort**

**Overview of participants:** This FGD was held with a group of one caregiver and six women who had been pregnant during the survey living in Matungulu and Kangundo. Participants' ages ranged from 20 to 30. Participants came from Tala, Kangundo, Kivaani, and Matungulu. None were disabled. Five came from FHHs. Five were farmers and two were businesswomen.

**Effectiveness of implementation:** Participants reported that their mother-in-law or mother picked up the cash from the bank. Four reported having problems accessing the additional cash top-up. One participant reported that her mother-in-law had previously collected the cash, but since she passed away they had not been able to receive the money. Another two respondents said that she had only ever received the usual CT-OVC, and never the additional cash top-up. One of these respondents added that her mother-in-law picks up the cash, and she suspected that the mother-in-law gave the money to her daughter; she therefore requested to be able to pick up the cash herself. Another participant had received the top-up previously, but last month had only received the usual CT-OVC transfer. Another participant said that although she was the caretaker of the orphans, her brother-in-law picked up the money, and she had not received any of the additional top-up. Participants reported that although they had been in touch with the children's office about their problems, nothing had been done to address these.

Participants reported that CHVs had visited them twice a week, except one who reported they came four times per month. CHV stayed for around 3 hours in the household and participants noted that the CHVs are accompanied by people from the public health department. When the CHVs visited, other family members were also called to hear the advice. Participants said they were happy with the frequency and duration of the CHVs' household visits. One participant also noted that they also host *barazas* (community meetings), where all beneficiaries are called and receive demonstrations such as how to boil porridge for children.

*"My mother-in-law is the one who used to receive the money, but after she passed away* [last year] *I haven't been able to access the money, for the reason that we have the card but we don't have the pin. We have been following up with the regional office, but we still have not been receiving* [the transfer]*."* (pregnant woman, 30, farmer, FHH, Kivaani, Matungulu and Kangundo)

*"In my case I was called by the children's office and they were inquiring information, 'Why don't you take the money from the bank?' Then we told them that the one who came to get the money passed away, and I presented the death certificate but nothing happened."* (pregnant woman, 30, farmer, FHH, Kivaani, Matungulu and Kangundo)

**Relevance:** Those who currently did not receive the cash transfer reported that they thought it would help them a lot. However, those that received it noted that the amount was not enough to make a big difference. They said it was not enough to buy food and pay school fees at the same time. While some reported that they would need at least 1,000 Ksh, two participants said they would need 1,500 Ksh or more.

Participants reported that they found the nutritional counselling useful and interesting. They said they had been given advice on a range of topics and gave examples of what they had been told. However, one participant, who was a caretaker, had a child aged three months when the CHVs started their visits, but reported that she had not received information about breastfeeding, although she had wanted to learn this. Other than that, participants reported no other topics they wanted to be trained in.

*"Sometimes we are not in a position of securing any job, and nowadays you just secure a job for a some hours and getting 200 Ksh or 300 Ksh. So if I am not able to get work that day and by any chance I receive the cash, I am very much happy because I can go home and go and buy things for my family."* (pregnant woman, 27, business woman, FHH, Kangundu, Matungulu and Kangundo)

*"If I can talk of the additional cash, with 1,000 Ksh I can't buy food and school fees at the same time."* (pregnant woman, 20, businesswoman, Tala, Matungulu and Kangundo)

*"When the educational people* [CHVs] *came to our place, I was able to be educated about many things that I didn't know about before… when they came to my place I was pregnant, I was advised on the diet I can have so that I can keep the foetus healthy. After I gave birth I was also advised how to breastfeed up to six months. I was advised about the hygiene in the home and also around the home compound. Then I was advised after I received the money to buy a balanced diet so I can be healthy and also the child can be healthy. So in general I was advised about many many things."* (pregnant woman, 30, farmer, FHH, Kivaani, Matungulu and Kangundo)

*"By the time the officers were coming, I had already given birth and the child was three months at that time. I have not been advised but I have some questions* [on some topics, including breastfeeding]*."* (caregiver, 24, farmer, FHH, Matungulu, Matungulu and Kangundo)

**Positive change:** Participants reported spending most of the money on food. They were sometimes able to spend some on school fees and other expenses. Spending patterns varied on the season, with more of the money being spent on food during the dry season, and participants reporting spending more money on school fees during harvesting time. Those who did not receive the additional cash said that they thought it would help them a lot and said they would spend it on food.

Participants reported their knowledge had increased and they had made changes in their behaviour following the advice of the CHVs. The practises people reported adopting included better hygiene and handwashing practises, poultry farming and planting a kitchen garden. They had noted positive impacts since changing their behaviours, including saving money on food at the market due to growing it in their own kitchen gardens, and better health.

*"After I was advised to start kitchen gardening I am practising that and now I am able to plant vegetables for the children because if you grow them yourself you can control the inputs of fertilizer. So the vegetables are always fresh and good for the young babies… When we plant vegetables in the kitchen garden, we can save some money which we would otherwise use to go to the market and purchase those vegetables. When it comes to the hygiene and for the young babies, we are able to control some sicknesses like diarrhoea... We were also advised on which tablets and medicines to use when they have diarrhoea."* (pregnant woman, 21, farmer, FHH, Tala, Matungulu and Kangundo)

*"I was told how to keep hens and do poultry farming. So now I have many of these hens and hens are able to lay eggs and the eggs are good to give to the child."* (caregiver, 24, farmer, FHH, Matungulu, Matungulu and Kangundo)

*"I have not been receiving the cash, but if it can be in a position of receiving the cash, I can do much in the family, maybe buying foodstuffs because I don't have any other support."* (pregnant woman, 30, farmer, FHH, Kivaani, Matungulu and Kangundo)

*"For example, during dry seasons and when there is famine, we particularly use the money in buying food."* (pregnant woman, 21, farmer, FHH, Tala, Matungulu and Kangundo)

*"During the time of harvesting, if we receive the money we just use it particularly in paying school fees."* (pregnant woman, 20, farmer, FHH, Tala, Matungulu and Kangundo)

**Challenges and constraints:** Participants reported that although they had been able to change many behaviours, they had been unable to undertake some due to financial constraints, which prevented people from keeping poultry, building a latrine and being able to afford seedlings for their kitchen gardens. Water was another constraint to practicing agriculture for some people in dry areas, particularly because they had to buy water.

*"I was advised to start poultry farming, but I was unable to do it due to shortage of money* [to buy the chickens and other necessary supplies]." (pregnant woman, 30, farmer, FHH, Kivaani, Matungulu and Kangundo)

*"In particular I was advised to have an additional toilet because we have a large homestead so one toilet is not enough for us as we are many. We started the project* [of building an additional toilet] *but were unable to finish*

*because of shortage of money for the materials such as cement."* (pregnant woman, 27, business woman, FHH, Kangundu, Matungulu and Kangundo)

**Suggestions for improvement:** Participants asked how long they would be receiving the additional cash, and said that they would like to receive the additional cash until their children were 18. They also requested the amount of the cash transfer was increased, which would allow them to invest in other livelihood opportunities. Those who had not yet started to receive the cash transfer requested that their situations were considered. Participants also mentioned that sending the cash transfer by M-Pesa would be preferable. They also requested to be supplied with water tanks to assist them with their kitchen gardens.

*"I am anticipating that if we are provided more cash, we can even get engaged in business activities so we can support our families and give them better lives."* (pregnant woman, 27, business woman, FHH, Kangundu, Matungulu and Kangundo)

**FGD 6. Caregivers, Matungulu and Kangundo, October cohort**

**Overview of participants:** This FGD was held with a group of six women living in Matungulu and Kangundo, whose ages ranged from 20 to 35. Participants all came from Tala. None were disabled. Four came from FHHs. Four were farmers, one was engaged in casual labour, and one had no livelihood.

**Effectiveness of implementation:** Participants reported that they collected money through the bank and from a universal trader agent. The people who signed up for the programme picked up the cash; this included their mothers-in-law, themselves or their husbands. Although all participants had received their cash, they had experienced problems at the bank with delays due to the bank being crowded. Participants reported that although the household member who first signed up for the programme picked up the cash, they gave the additional top-up to the mother with a small baby to spend, and reported that they had no problems with a lack of transparency.

*"For example, you go one day, then after you spend the whole day there you are not being able to access the counter and get the money, so you have to go the next day."* (caregiver, 32, farmer, Tala, Matungulu and Kangundo)
**Relevance:** Participants reported that the cash was useful to them. However, they noted that while they appreciated everything they received, they needed additional cash.

Participants said they found the advice very useful, and that it had contained some information they had already known and some they did not. They suggested that the counselling programme be extended to other people in the community, particularly information about breastfeeding and a balanced diet, as many people in their communities were not aware of this and spreading this knowledge could have health benefits for many.

*"I learned about washing hands through the use of jerry cans outside the washrooms. I was not aware that when you wash your hands from a basin, you know you are washing and rinsing from the same basin, so the diseases will wash and at the same time you will pick up the diseases and go away with them."* (caregiver, 20, farmer, Tala, Matungulu and Kangundo)

*"Breastfeeding should be given some emphasis, because many women in the village give the children food early and that gives them some health problems."* (caregiver, 30, casual labourer, FHH, Tala, Matungulu and Kangundo)

*"The balanced diet should be given more emphasis [coverage], many people are not eating a balanced diet currently – they eat matoke and potatoes and they are the same group of food, so that should be given more emphasis."* (caregiver, 28, farmer, FHH, Tala, Matungulu and Kangundo)

**Positive change:** Participants reported that most of the cash-top-up was spent on food and other items for their young children. One noted that she sometimes bought treats for her young child with the money. They also reported spending money on seedlings for their kitchen gardens. Participants reported that how they spent money varied, depending on the season and on the needs of the child at the time of the transfer. During the rainy season, they spent less on food from the market, as they were able to access this from their kitchen gardens, and spent it instead on other items for their children, such as diapers and clothes. They were also more likely to spend the money immediately after receiving it in the dry season or when there had been a poor harvest, and more likely to keep it

and spend it in increments in the wet season. They reported that how the main part of the CT-OVC transfer was spent was a communal decision, but how the additional top-up was spent was decided by the mother of the child.

Participants said that they had learned a lot through the CHV visits and gave examples of information they had received, including on hygiene, such as drying kitchen utensils, building a dish rack and handwashing, breastfeeding, feeding children, and other health advice related to children, such as how to cook for young children, portions, vitamin A supplementation and the use of zinc and ORS for treating diarrhoea. They had noticed health improvements since adopting these behaviours, and had also been able to save money on food through growing kitchen gardens as advised by CHVs.

*"I am very interested in the breastfeeding, because before, I never used to breastfeed for six months and I kept going to hospital with some sickness of the babies. But now, with [my most recent] child, there is no diseases. I breastfed them for six months and I can see changes, so I'm very happy about that."* (caregiver, 32, farmer, Tala, Matungulu and Kangundo)

*"Out of the hygiene advice, we were able to eradicate many diseases from our families… In general, we were changing to keep the latrine clean, everyone to wash hands before eating, when you are changing the small baby's pampers or nappies to wash your hands, when giving the child food, you have to wash the baby first, when you are cooking you also have to wash your hands first."* (caregiver, 30, casual labourer, FHH, Tala, Matungulu and Kangundo)

*"For example, during rainy season, there are lots of vegetables, like leaves from pumpkins and mchicha - so the money that could otherwise be used in purchasing vegetables could be used for other uses."* (caregiver, 32, farmer, Tala, Matungulu and Kangundo)

**Challenges and constraints:** Participants reported that they had struggled with a lack of money so had not been able to implement all the changes they wanted or had struggled to implement some, including buying seedlings for the kitchen gardens, building latrines, and constructing a dish rack. Some kitchen gardens had also been affected by pests, necessitating pesticides which were expensive. By contrast, easy changes to implement according to participants were using jerry cans for handwashing, boiling water, and breastfeeding. It had also been easy for some to give their children vitamin A supplementation, but depended on the location, as some lived far from health centres. They did not report water as a being a large constraint for their kitchen gardens, as the plot was small and participants recycled water used for cleaning dishes for irrigation.

*"It was difficult to build the dish rack. Because the wire mesh is expensive for us…* [it] *cost 700."* (caregiver, 28, farmer, FHH, Tala, Matungulu and Kangundo)

*"They could visit a certain home and there was no latrine in that particular home, so they would advise to dig a latrine or to build some latrine. But there is shortage of money, so in such a case you find there is much difficulty in implementing this... For the kitchen garden it was also difficult because there was a need of seedlings but there was a shortage of money to purchase them."* (caregiver, 32, farmer, Tala, Matungulu and Kangundo)

*"The kitchen garden was not a big problem because it is not a large piece of land and we can reuse dish water, if it doesn't have soap, to irrigate it."* (caregiver, 28, farmer, FHH, Tala, Matungulu and Kangundo)

*"Sometimes you find the vegetables in the kitchen garden are infected by pests… because some* [pesticides] *are expensive, some are not available, it can be a problem."* (caregiver, 30, casual labourer, FHH, Tala, Matungulu and Kangundo)

**Suggestions for improvement:** Participants reported that they thought receiving the cash transfer through M-Pesa would be better. They also suggested that the CHVs could bring some form of support, such as foodstuffs like flour for porridge, when they visited households. They also suggested that the CHVs provided assistance for households that did not have a pit latrine to dig one, and provide more mosquito nets as those that had been provided were

starting to become damaged. While water was currently not a problem, they also suggested being provided with tanks or boreholes in some areas in anticipation of the dry season.

*"Due to the long rains, the heavy rains, we have water right now, but we anticipate being supplied with tanks or boreholes in some areas later."* (caregiver, 24, no livelihood, FHH, Tala, Matungulu and Kangundo)

**FGD 7. Mixed group (pregnant women and caregivers), Kathiani, October cohort**

**Overview of participants:** This FGD was held with a group of 10 women, six caregivers and four women who had been pregnant during the survey, living in Kathiani. Participants' ages ranged from 22 to 62. Participants came from Kathiani and Mitaboni. None were disabled. Six came from FHHs. Seven were farmers, two were casual labourers and one was a businesswoman.

**Effectiveness of implementation:** Most participants reported that their mother, who had originally signed up for the cash transfer programme, collected the money. Two participants reported that they themselves collected the money. The majority of participants reported that they received their cash through agents. However, they had problems as the banks and agents were often congested, and agents sometimes ran out of money. One respondent also noted that there were sometimes delays, or months when the money was skipped, but the amount was provided in full at the next distribution. While two reported that they received notification of the distribution of cash from the Ministry of Health, others reported that they did not receive any communication regarding when the money had been paid into their accounts.

Participants said that they were visited by CHVs two times a week, and that their visits lasted between one to two hours. One participant said her CHV had stayed longer, arriving at 1pm and leaving at 6pm. Participants said they were happy with the duration and frequency of visits.

*"Sometimes there is congestion, sometimes we can even go and the money is not yet distributed."* (pregnant woman, 32, casual labourer, FHH, Mitaboni, Kathiani)

*"When we got to the agent, sometimes there is a shortage of money and then you are advised to come the next day."* (caregiver, 25, farmer, Kathiani)

**Relevance:** Participants said the cash top-up had been helpful but was not enough, particularly for large families who had school-age children and therefore needed to pay for school fees and materials for school. One suggested that the general CT-OVC transfer would need to be increased from 4,000 Ksh to 6,000 Ksh to cover these costs. Another participant noted that it was not possible to save anything with the current amount they received.

Participants reported the information from the nutritional counselling was new to them and that they had found it useful. They also recommended spreading the campaign to others in their community, so they could also learn and benefit from the information.

*"The cash is not enough to meet the needs of the child. For example, nowadays, when you go to buy the foodstuffs they are of higher prices and also sometimes you need to save some cash for emergencies."* (pregnant woman, 24, farmer, FHH, Kathiani)

*"In some families we are in large numbers. Some of the children are in school and they need fees, and also uniforms, so there is need of additional cash."* (caregiver, 26, farmer, FHH, Kathiani)

*"The advice on the balanced diet and bringing up of the child has helped us to prevent stunted growth and if others are educated on such, they will be able to bring up their children and also to take care of themselves."* (caregiver, 49, farmer, Kathiani)

**Positive change:** Participants reported that they had been taught a lot on a range of topics by CHVs. They had implemented the behaviours they had been taught and had seen positive changes regarding the baby's health from advice on exclusive breastfeeding, as well as decreased diseases in the household from adopting improved hygiene

practises. Participants also reported they had been able to make utensil racks for drying dishes, and had been able to dig a waste pit.

Participants reported that the additional cash was given specifically to the new mothers and that it was mostly spent on additional food, but sometimes spent on other items, such as a hen to provide food for children. One caregiver said that what the money was spent on depended on the age of the child, as if a child was still breastfeeding, the money might be spent on foods for the mother or other things. Participants noted that they spent more on foods, such as milk and fruit, during the dry season. Another caregiver reported that she sometimes spent the money in the dry season on repaying debts which she had incurred to buy basic food and basic household needs. Participants noted that food prices depended on the location, and tended to be higher in the dry season. For example, they cited that 1 kilogram of beans could cost around 80 Ksh during the wet season, but could increase to 120 Ksh when it was dry. However, one participant noted that they also incurred additional costs during the cold season, as children were more likely to get sick.

*"*[Spending] *Depends on the time, sometimes I buy foodstuffs, sometimes I buy something for child, like a hen… in my case, I receive 1,000 Ksh, so some can be spent on other things."* (pregnant woman, 24, farmer, FHH, Kathiani)

*"*[Spending] *depends of the age of the baby - if you find the baby has started consuming foodstuffs, you buy food. But if maybe she is breastfeeding, the money can be used in doing something else, like you can purchase something for the mother itself because she also needs to be healthy and have a balanced diet."* (caregiver, 49, farmer, Kathiani)

*"In some families, they are in large numbers. Some are in school, and they need fees and also some uniforms, so there is need of additional cash. The general amount should go up to 6,000 Ksh* [from 4,000 Ksh]*... also there needs to be an addition of the top-up because, here's an example, it's the cold season. In the cold season you find that babies have some problems like cold, coughs and other diseases, so every now and then there is need of additional cash to take them to the clinic. So if they give the addition they can buy foodstuffs, and the rest they can save so in case of an emergency we have something to use."* (caregiver, 26, farmer, FHH, Kathiani)

*"In my case I wasn't aware that I had to breastfeed for six months, but for now I am aware of the importance and the benefit of doing it for six months. Previously, I used to think the baby should be given food after three months… [now] when I go to the clinic there is addition of weight and she* [my baby] *is in good health."* (pregnant woman, 24, farmer, FHH, Kathiani)

*"I was advised to give my child a well-balanced diet, to use a jerry can and soap to wash my hands after visiting the washroom… this prevented diseases and also diarrhoea of the young babies."* (caregiver, 22, farmer, Kathiani)

*"It was easy for me to make a utensil rack for washing dishes and drying them in the sun, to start using jerry cans in the washrooms, and also to dig a pit to dispose of waste there. Even sometimes a young child can do that because it is an easy job."* (caregiver, 49, farmer, Kathiani)

**Challenges and constraints:** Participants reported that they had faced some problems with the kitchen gardens. One, who reported they had been taught to use sacks, had not been able to grow enough for her family so she had decided to plant in the ground instead. Another said that her vegetables had been eaten by hens. They said that water availability was not much of a problem, as they could use waste water from the household to water the vegetable garden.

**Suggestions for improvement:** Participants agreed that it would be better to receive the money by M-Pesa, as this would minimise transport costs to pick up the money. They also reported that there was a need for the programme to be expanded and for the CHVs to visit more people in the community.

*"For example, in my location, there is only one CHV so when she comes to the place, she is the one generous enough to call others to be educated at the same time. So if all goes well, it would be good to have more."* (caregiver, 49, farmer, Kathiani)

## IDIS WITH NICHE BENEFICIARIES

In addition to FGDs, a total of seven IDIs were conducted with NICHE beneficiaries, three of whom also participated in an FGD. Summaries of their experiences, presented as case studies, are presented below. Respondents who were also FGD participants are indicated with an asterisk (*). Beneficiary names have been changed to protect their privacy.

**CASE STUDY 1: Linet, 35, FHH, farmer, Kyanika, Kitui Central (pregnant)**

Linet heard about the CT-OVC and signed up for it through the Chief's office. She has a 16 month-old son and also lives with and is the carer for a her disabled, elderly mother and four nieces and nephews, whose father died a long time ago. Since receiving the CT-OVC cash transfer, Linet said her life has improved a lot, as she can now afford food, which has also helped the children to attend school. "There is a difference in that before, we could even sleep without food, the children could spend the whole day without having something," she said. "The children could drop out of school, but nowadays they can settle down and study."

As part of the Shika Tano campaign, Linet received twice-weekly visits from CHVs, who would visit for around three hours at a time. Linet thought that the counselling was useful, particularly the advice for nutrition during pregnancy, exclusive breastfeeding for six months, and how to provide a balanced diet for her family. She said, "I have been taught cooking, I have learned I can cook greens after I feed the baby, and I am expected to give the baby a fruit." Since hearing the information, she has noticed an improvement in her family's health: "The advice was very useful to me in that the children are now safe from disease… they can stay for long without being infected." Linet also noted that the household diet has changed, and said, "Before, we could depend on grains throughout, but nowadays we can change our diet, like today we eat rice and other days we eat ugali, so there is a difference."

Linet collects the cash for her family as the main caregiver of her family. Although this was not a big problem for her as she does not live far from the bank, she noted, "Sometimes you can't go to the bank for two weeks... for one or two weeks after the distribution of cash there is a problem of congestion, but the ones with babies they are the first priority." Immediately after receiving the money, she goes to the market to buy food, including one sack of maize, one sack of beans, sugar, salt and other foodstuffs.

She reported that the cash she receives through the CT-OVC and the cash top-up is enough to cover her costs, and she spends most of it on food from the market and the rest on school costs, and the cash top-up on items for her new baby. Whereas most of the money is spent on food, in the rainy season she also spends some on fertilizer, as her kitchen garden is affected by leaching when it rains. Thanks to the cash transfer, she is able to consume more of the produce from her kitchen garden, which she previously sold. She says, "Before, when we harvested from our farms, we would just sell it immediately due to lack of cash. But now we have the cash from the programme, we can keep the food and keep on consuming for a long period of time."

However, she reported that the money was not enough to allow her to have any savings or make all the changes she hoped to. "Some advice, yes, I want to implement, but it's difficult due to lack of cash. For example, sometimes when I buy food and pay school fees, at the end of the day I have nothing to buy other things," she explained. Linet hopes the transfer will be increased so she can purchase clothes, school uniforms and shoes for the children.

**CASE STUDY 2*: Jecinta, 31, MHH, farmer, Kyangunga, Kitui Central (caregiver)**

Jecinta lives in a household of eight people, comprising of herself, her husband, four children (all of whom attend school), one 17-month-old grandson and another relative. She first heard about the CT-OVC transfer from other people in her community and signed up. Since starting to receive the CT-OVC transfer, she noted, "I have seen changes, as now I am able to educate my children, and also I was able to build a house now that I had the cash to buy the iron sheets." She reported spending most of the money on school fees and school materials, and also bought a donkey for 1,200 Ksh to help her with the agriculture.

Jecinta found the nutritional counselling very useful. She found the information about planting vegetables in a kitchen garden particularly useful, and reported these were not difficult for her to implement as she was a farmer before the CHVs visited. After adopting some of the agricultural practises she was taught by the CHVs, the yields from her crops increased. As a result, she is able to sell the surplus and earn money, whereas she was previously never able to sell any crops as she did not have a surplus and only grew enough for household consumption. She spends the income she earns from selling cash crops, such as green grams, on household purchases and school fees.

**CASE STUDY 3: Ngina, 20, FHH, business, Komarock, Matungulu (pregnant woman)**

Ngina and her five-month-old son live with Ngina's guardian, who is a widow and receives the CT-OVC money in their household. Ngina decides how the additional top-up is spent and spends it on food for the baby including bananas, other fruits, and flour for porridge.

Among the information that Ngina received from a CHV was to take IFAS when pregnant, how to breastfeed and information about exclusive breastfeeding for the first six months of the baby's life, after which to start giving the baby food, and giving Vitamin A to young children. She was also advised on hygiene topics including hand washing before cooking and after changing the baby, building a dish rack for drying utensils. They were also educated about planting vegetables, which has helped her family save money. "We have seen some positive changes, like planting vegetables. We used to spend a lot in purchasing vegetables, but now that money can be used for other things," she says. Ngina's household grows onions, spinach, sukuma wiki and managu, all for subsistence.

However, she feels that the cash top up is not enough to meet all the baby's requirements. "Sometimes I am willing to buy clothes for the baby, but there is no cash, because when you first spend on food, there is none left," she explains.

**CASE STUDY 4*: Agnes, 28, FHH, farmer, Tala, Matungulu (caregiver)**

Agnes' family receives the CT-OVC transfer through her mother, who is a widow, as well as an extra 1,000 Ksh through the additional cash top-up. Her mother is responsible for picking up the money from the bank.

Agnes spends most of the additional cash top-up on food for her young son, mostly on vegetables and fruits, such as watermelon which costs 10 Ksh per piece. She said she had learned a lot from the CHVs and explained, "They taught me a lot, on how to give a balanced diet, that is something I didn't know. Before I could cook only one food from one food group at the same time, but now I know how to cook a balanced diet." She also learned about the importance of handwashing at critical times such as after visiting the toilet, and had set up a handwashing station a few metres from her latrine. Although she was not pregnant during the time of the survey, she also had young children and she benefited from the information about exclusive breastfeeding. "My child is one and a half and I'm still breastfeeding. If I did not know about that, I might have stopped," she said, adding that her young son was sick less often as a result of being breastfed. She also reported being taught about farming practises and making changes following this information. "We made lots of changes in our farming practises, like to buy those pesticides. Farms have different diseases, they can be attacked by different pests which need some particular pesticides. When the CHVs came, they taught us on which pesticides we can use," she reported.

Agnes noted however, that the additional 1,000 Ksh is only enough to buy food. If she had more money, she would use it to expand the kitchen garden. "We are many in my family, and we find that after we grow the sukuma wiki in the kitchen garden, it cannot feed all of us," she said. She added that the kitchen garden is not always reliable, and she would like to be able to buy more pesticides. "There is no one who is working in our family, no one has a job, we depend on farming," she explained. "So sometimes, like last season, the maize did not come out well. We were invaded by some pests, so we didn't get anything. Because we rely on farming, if this happens we don't have enough food for the family – we need some money to buy food in the markets." Agnes added that they also needed additional cash for contingencies, such as sickness in the family.

**CASE STUDY 5: Cecilia, 27, FHH, Farmer, Kathiani (pregnant woman)**

Cecilia's household started receiving the CT-OVC transfer and the additional cash top-up when her mother went to Ntoto to try and start a business, and Cecilia was left at home alone with her younger brother. She was visited by people from the programme, who signed up the household for the programme. Her mother collects the cash from a local agent. Since starting to receive the money, Cecilia says she has been able to support her family and buy food for them.

Cecilia received twice-weekly visits by CHVs, whose visits lasted at least two hours. She was advised on a number of things, including breastfeeding, antenatal visits to the clinic, a balanced diet, and various hygiene and sanitation practices. They were also taught about using a kitchen garden; she had been a farmer before, but had only grown crops for cash cropping. She was able to start growing a kitchen garden and implemented the hygiene behaviours, such as digging a waste pit, purifying water by boiling it or using Water Guard, using liquid rather than bar soap, maintaining cleanliness in the cooking area, washing vegetables before cutting them and drying utensils before using them. She reported seeing beneficial effects of adopting these behaviours. On waste disposal, she noted "We used to dispose of the waste anywhere, and also then it would decompose… After the CHVs came and we were educated that it is good to have a pit, now we sweep the compound, take the waste or any other bits to the pit, and then we burn it." She also reported seeing less disease and illness, which had been common in her family, since changing behaviours.

Cecilia spends the cash on food, mainly that which she cannot grow: "In my place, we are able to grow maize and beans but sometimes we want rice. So you have to purchase rice, because we are not in a position to grow rice on our farm." During the rainy season, she is also able to buy other items, including fungicides and pesticides for the variety of crops in her kitchen garden, and items for insurance during the dry season. For example, she says, "During the rainy season, I use some for food and with the remainder I will buy something like a hen. So that in times of difficulty, you can sell the hen." However, she would like more education on the kitchen garden and refresher trainings. "Sometimes we plant something but we are not sure of the protocol, the spacing. We should be reminded how to do it, or how to water it," she explained.

**CASE STUDY 6: Faith, 20, FHH, farmer, Kaewa, Kathiani (pregnant woman)**

Faith's household first became involved in the CT-OVC programme in 2016 when her mother, a widow since 1998, found out about the programme, and in 2017 they were called by the Chief that the money had been distributed. In October 2017, she started receiving the additional top-up. "In October last year my mum was called to the sub-office – by then I was pregnant, then my mum informed me that families that are beneficiaries of the normal money and there is someone who is pregnant or has a child under two years are advised to go and register themselves." She was then visited by people from the programme in her household, who registered her and told her she would start receiving visits from CHVs.

Faith picks up the money from the bank in Machakos, but notes that it costs her 100 Ksh to get to the bank and back and that sometimes she experiences delays receiving the cash due to congestion at the bank. Faith noted that she would like to receive a message when the money has been distributed, and that the money should be sent by M-Pesa. She explained, "Through the M-Pesa it would be easier for us because sometimes you find, yes, the money has been distributed. But if you pick it up from Machakos, you have to use your fare, you have to take time to reach there but through the M-Pesa you can receive the text and the next minute you can access the money."

The topics Faith was taught about by CHVs included taking IFAS during pregnancy, dietary diversity, exclusive breastfeeding, and taking the children to hospital to receive ORS and Zinc treatment for diarrhoea and vitamin A supplementation. She was also taught about hand washing, water purification and growing food for the household in the kitchen garden. "Through the nutritional counselling, I have been advised to do many things," she said. "For example, during the farming activities, we have been advised to use fertilizer so that we can harvest more." She said that they had grown crops before but all as cash crops, and added, "Previously we used to plant maize, beans, cowpeas and green grams. But after we were educated about the kitchen garden we are also now practising planting vegetables." She has seen positive changes since following the advice of the nutritional counselling. "Previously we did many things differently, like using water before treating it. During this time we could have many illnesses. Also, we were not aware we had to wash our hands after using the washrooms. Previously, we were also purchasing vegetables from the nearby market but now we are just taking them from our kitchen garden," she reports. She also noted that the amount and the type of food she spends money on changes during the season: "During the time of harvest we have food in our farms, like we have beans, we have maize, so you find the food that you purchase from the market is that which you don't have in the farm. But in the dry season, we purely use that money in buying food for the family."

However, although she was able to change many behaviours, Faith noted the money they receive is not enough and she is not able to save any: "In my case, I receive 1,000 Ksh over two months and now they say that money should be specific for the children. But that 1,000 Ksh lasts only for one month." She said that they also needed additional cash in order to maintain the kitchen garden: "I'm also anticipating the addition of cash, because those seedlings which we use in the kitchen garden, we have to purchase them. Then after planting the seedlings there is need of fertilizer, there is also need of fungicide and other insecticides, and all these need money." Faith works as a casual labourer to earn additional cash to meet the needs that are not covered by the cash transfer, such as helping others on their farms. However, the work is rare and she can only earn around 200 Ksh for a morning's work. She voiced the need for livelihood assistance in order to be able to support her baby, and also continued support: "When that project will end, we will still have children and will still need support. So in addition, if possible we can get support to be engaged in activities or jobs... If I start a business I can support my baby. If the business was close to my home, that would be better so I can continue to take care of my baby."

**CASE STUDY 7*: Caroline, 62, FHH, Farmer, Kathiani (caregiver)**

Caroline heard about the CT-OVC programme from some people visiting homesteads, who were mobilising people to attend a meeting in the District Commissioner office. At the meeting, she was selected and was told to go to Goleni to be registered. Between the initial meeting and going to Ngoleni, her husband and daughter-in-law died in the same week. At Ngoleni, she was registered and was told to come back a few weeks later. When she returned, they received bank cards and were asked some questions about the family, and she registered the names of the young children in her household.

Caroline is responsible in her household for collecting the cash, which she gets from an agent. However, she is sometimes unable to receive the cash on the days she goes to collect it, as the agents are crowded and sometimes run out of money, meaning she has to return the next day, but as she does not live very far from the agent, this is not a big problem for her.

Caroline is the main caregiver in her household, as her two sons who live with her rely on casual labour and have no reliable source of income. She reports that before being part of the CT-OVC programme, she was not able to send her children to school despite saving as much as she could. However, all five of her eight grandchildren who are old enough to go to school now attend. The cash transfer and top-up is vital as the household has no steady source of income. She says, “I am the caregiver, with the assistance of my two sons. But these two sons rely on casual labour, so sometimes they can get casual labour, sometimes they can fail to get, but mostly I am the caregiver. So the programme is of much advantage to me. When I receive the money I am very much happy because it helps me a lot.” During the rainy season, she spends the money on items for her kitchen garden, as she must buy new seedlings for every new generation of crops, and in the dry season she mostly spends it on food and other items, as well as repaying debts incurred to buy food. “After receiving the money and maybe it is towards rainy season, I can buying seedlings or fertilizer. When I have a lot of work in the farm, I can also look for some people to assist me and I can pay them using that money,” she explained. “The rest of the year, I can use the money to purchase just food in the dry season or in the time of famine, and if there is extra I can buy clothes for the child who was left an orphan because her father has no job.”

Caroline found the information from the CHVs regarding the kitchen garden to be the most useful. She said, “The people were coming round to my home, and they advised me on the kitchen garden. Previously I had one, but this one I was just practising for formality, I never knew how to do it in the right way. I never knew which particular seedlings to use there, but now I was advised accordingly on how to do it, which seedlings to use, like spinach, sukuma,” she said. She added that kitchen garden had allowed her to save money, and said, “[The kitchen garden] was an advantage for me because I can take the vegetables from that farm and spare that cash which I could use to purchase them from the market.” She reports her kitchen garden was very successful, and was pleased that her kitchen garden had been so successful that CHVs had taken a photo of it when they had visited her. Caroline was very positive about the cash transfer and nutritional counselling programme, and felt it should be expanded to other members of the community, saying, “My prayers are that God shall bless the programme to keep it ongoing and also to bless others like me.”

# ANNEX 11: EVALUATION MATRIX

**Evaluation Name**: Final report: Evaluation of NICHE in the first 1,000 days of a child's life in Kitui and Machakos counties, Kenya

**Evaluation Purpose:** to assess causal linkages between the NICHE programme and expected outcomes such as improvements in growth, food consumption and positive health, nutrition and hygiene behaviours. Research questions centered on the programme's *effectiveness, efficiency* and *relevance.*

| Evaluation Question | Suggested methods for answering this question |
|---|---|
| *Question 1:* Can additional cash transfers with nutritional counselling increase the anthropometric outcomes in children under 2 years? | Propose a panel household survey structured as a randomized control trial (RCT). Differences in primary anthropometric outcomes between treatment and control groups from baseline and endline surveys. The sample population shall be drawn from existing CT-OVC cash beneficiary households in Kitui and Machakos Counties that have a pregnant woman and/or child aged 0-24 months. |
| *Question 2:* Can additional cash transfers with nutritional counselling increase secondary outcomes (including children fed according to World Health Organization (WHO) guidelines)? | The same panel survey, again structured as a randomized control trial (RCT), shall be used. Differences in secondary outcomes shall be measured. |
| *Question 3:* What are the causal pathways related to decision-making through which awareness and understanding of best practices (e.g. hand washing and breastfeeding) translate into improved nutritional uptake? | Two midline surveys, conducted four months apart, shall be used to assess impact pathways through secondary outcomes and seasonal effects. (This however changed to three midline surveys, due to the additional October 2017 baseline and the extension of the study to June and not March as initially planned.) This shall be further complemented by a combination of in-depth interviews (IDIs) with key stakeholders and in particular FGDs with participants. |
| *Question 4:* What are the possible confounders or externalities in the study area which may be influencing the results, including delays in receipt of cash? | IDIs and FGDs, and their careful analysis, will be essential to identifying and understanding confounders and externalities. |
| *Question 5:* How efficient was the cash transfer system in terms of promptness of payments and ease of access? | IDIs and FGDs, and their careful analysis, will be essential to identifying how participants experience the intervention, confront obstacles, or uptake lessons and cash. |
| *Question 6:* How efficient was the use of CHVs in delivering nutritional counselling in terms of frequency and duration of | IDIs and FGDs |

| Evaluation Question | Suggested methods for answering this question |
|---|---|
| visits, and ease of access to information? | |
| *Question 7:* Was the amount of cash received sufficient to make any changes? | This will be a combination of statistical results from the RCT (a difference-in-differences analysis) and qualitative feedback from participants. |
| *Question 8:* Was the nutritional counselling appropriate to their needs? | This will hinge most on qualitative feedback from FGDs with participants. |

# ANNEX 12: OPERATIONAL RESEARCH & CASH TRANSFER IMPLEMENTATION TORS

**Terms of Reference for Institutional Contracts**
**Researching the Outcome and Impact of the Nutritional Improvements through Cash and Health Education (NICHE) Programme on the First 1000 Days of Life in Kitui County Kenya**

## 1. IDENTIFICATION

| | |
|---|---|
| Description of Service | Nutritional Improvements through Cash and Health Education programme (NICHE) Research of NICHE Consultancy |
| Expected start date: | March 2016 |
| Expected Completion date: | March 2018 |
| Reporting to: | Chief of Nutrition<br>MCNP Programme Manager |
| Technically Reporting to: | Luis Corral, Acting Chief Social Protection |

## 2. BACKGROUND

Kenya has a long history of investing in social protection and adopted the National Social Protection Policy (NSPP) in 2012. The NSPP aims to strengthen the delivery of social assistance to poor and vulnerable populations. There has also been a growing trend towards cash transfers. Under the National Safety net programme, 4 social cash transfer programmes have reached more than 500,000 households in 47 Counties. Recent evaluations of social protection programmes show results, but not in anthropometric outcomes. Both Cash Transfers for Orphans and Vulnerable Children (CT-OVC) and Hunger Safety Net Programme (HSNP) show increases in consumption and dietary diversity for households but not in the weight and height of children in the first 1000 days.

There is evidence from Latin American countries that cash programmes can make anthropometric difference, particularly for stunting, for example 5-10% difference for programmes in Mexico and Nicaragua. The existing Social Safety net programme design in Kenya is based on the Latin American models however recent evaluations have not shown any impact on nutrition outcomes from the Kenya model thus this is a missed opportunity.

The European Union / Ministry of Health SHARE programme commenced in November 2014. The overall objective of the programme is to significantly strengthen community resilience to handle shocks and stress through improved access, provision and monitoring of health, nutrition and sanitation status of the most deprived populations (women and children) in the counties under the Arid and Semi-Arid Lands (ASALs). The specific objective is to improve maternal and child nutrition of deprived communities in Mandera, Wajir, Turkana, West Pokot, Tana River, Samburu, Kitui, Kilifi and Kwale counties. The EU SHARE programme has a underlying theory of change model to the design of the programme and this model informed the need and connection to cash transfers building individual, household and community resilience. This research will test out the theory of change hypothesis.

As part of the EU SHARE programme, UNICEF Country office aims to test that focusing on combining nutrition counselling with cash can improve nutrition outcomes. This test will consist of combining additional cash amounts and nutritional counselling within existing cash transfer

schemes and closely monitoring the impact to households with pregnant women or/and or children under 2 years of age over a two years period. The evidence generated will then lead to influencing policy and potentially take successful models to scale given the Government of Kenya leadership on social protection programmes. The implementation firm will specify the exact number of households for each cohort selected for the two cash transfer programmes and these same households will be followed for a two years period.

Kitui has been selected to pilot these cash transfers because the County is easily accessible, has high stunting rates and has existing cash transfer programmes. We are hoping to see increased dietary diversity with additional cash, improved food security and counselling but we need robust independent research to observe whether this is really an outcome of the NICHE programme

In view of the above and with technical support from UNICEF, the Kitui County Government has developed the "Nutritional Improvements through Cash and Health Education" (NICHE) programme. A technical consultants report explaining how the NICHE programme was developed will be available for the successful applicant, outlining the theory of change model, showing how cash transfers is thought to influence household consumption. There is also a further description of the NICHE programme in annex 1 of these terms of reference. The NICHE programme will be modelled in the most vulnerable wards of Kitui County first, using existing and established payment / disbursement mechanisms. This research will assess the impact of the additionality of more funds beyond normal / existing cash transfers and will target 3,800 households with children under 2years of age and/or pregnant women.

UNICEF conducted a literature search on Cash Transfers and Child Nutrition (Richard Groot et al August 2015) and summarised information gaps. This literature search concluded that current research shows positive results for cash transfer programmes at household level but that there is an information gap around the impact on the individual. The research from this NICHE programme will be targeted at individual under 2yrs children and pregnant and lactating women. Children will be categorised 0-6months, 6 to 12 months and 12-24 months to assess impact across the categories. Groot et al also identified a research gap in understanding of causal pathways between cash and any changes in infant and young child feeding practices. This research will seek to provide explanation of these pathways. Many of the available papers also seem to look for impact for wasting and acute malnutrition. This research will identify links for stunting, as well as wasting and underweight. The nutritional status of pregnant and lactating women will also be measured with MUAC.

UNICEF's *Social Cash Transfers and Children's Outcomes A Review of Evidence from Africa* was recently published by ESARO in 2015 and synthesizes the emerging evidence from various reports on the impact of social cash transfers in Africa. The impact of social cash transfers on consumption, food security and nutrition was considered and a conceptual framework proposed. This review highlights the need for further research and recommends that any research consider the impact of social cash transfers over a long time period, that the target group should be clearly specified and that measures are from a wide range of indicators such as anthropometric, dietary diversity, food consumption and participation in health and social services. This study will take these recommendations into account.

**Purpose of these Terms of Reference**

These Terms of Reference are for a Research study to provide scientifically robust and statistically significant research to demonstrate any impacts of the NICHE programme. If the NICHE programme has impact then we hope that the existing Kenyan social protection National schemes will incorporate and invest in the NICHE methodologies. Changing National Social Protection schemes requires investment and risk and so we could only propose NICHE if we were confident of the potential impact. We need this research to be confident of predicting

the impact.

The purpose of this research is to determine effects and look for causal links between cash transfers, additional cash transfers and nutrition counselling and the nutritional status of under 2 years and pregnant and lactating women. The research design will establish a baseline and measure any changes from the interventions over the two years programme period.
We are looking for an experienced firm or academic institution with a track record of producing scientifically robust research which can be peer reviewed and hopefully published and who are knowledgeable and have documented experience in conducting research of cash transfer programmes in Kenya and or in the region.

## 1. SCOPE OF WORK

The scope of this ToR is to apply **robust research methods** to demonstrate any causal links between the NICHE programme interventions in Kitui, Kenya and the expected outcomes and results of the NICHE programme which are described in annex 1 below. The specific of the methodology will be agreed once the IC is finalised and during the inception phase in consultation with the key stakeholders.
The NICHE programme will operate as part of the already existing and mature CT-OVC cash transfer programme and the cash for assets national programmes in Kitui. Another institutional contract will be awarded to a firm to run the NICHE programme for two years. The NICHE programme will be a new addition to the already existing national schemes. The successful research firm of this RFP will need to work closely with the implementing agency.
The objectives of the research are to:

1. Assess whether additional cash transfers and/or additional cash transfers with nutritional counselling can increase the number of children in recipient households who are fed in accordance with the World Health Organisation's Infant and Young Child Feeding guidelines and who participate in using high impact nutrition interventions (HINI);
2. Record whether households with additional cash transfers and / or additional cash transfers and nutrition counselling have an improved awareness and utilisation of community health facilities to support better child growth and development, particularly for the first 1000 days of life;
3. Describe the causal pathways between cash, nutrition counselling and an increased awareness and understanding of practices resulting in improved nutritional uptake including the importance of hand washing and exclusive breast feeding, especially for the first 1000 days of life;
4. Measure whether children in recipient households have an overall improvement in height for age and weight for length Z scores, especially those under 2yrs and whether pregnant and lactating women and women have healthy nutritional status.
5. Identify any specific confounders for the research and monitor them throughout the research period, for example availability of food in the market where two – three commodities could be identified and monitored.
6. Another confounder could be delivery mechanisms of the cash transfer programme such as delays in the cash transfers or inappropriate methods of delivery. The researchers will monitor the existing cash transfer accountability feedback mechanisms to identify potential confounders
7. The proposed research design should systematically follow the UNEG standards researching the outcome and impact of the NICHE programme considering all aspects such as effectiveness, relevance, efficiency, rights, gender.

## 2. METHODOLOGY

The research will begin with an Inception Phase including an assessment of the **implementation design** of the NICHE Programme and the proposal of potential research designs. This will be done in close consultation with the Implementation firm who are being commissioned under a separate ToR. **Relevant stakeholders** including Kitui County Government officials **must be involved** early on in the research design process and given the opportunity to contribute to research design, including by identifying issues to be addressed, potential research questions to be answered and research instruments to be used.

The inception phase will also include a desk review of existing research internationally and nationally on cash transfer programmes and their impact on nutritional status of under 2yrs. Where possible the research design for NICHE should build on the existing research base such as using this data to describe the control cohort, repeating study designs already used so that the NICHE programme can be compared with previous research results.

**Governance:** The inception phase should also be guided by UNICEF who will propose governance arrangements for the research such as using the existing EU SHARE advisory group with co-opted representatives from the existing cash programmes. This group will guide the research and oversee issues such as data ownership and intellectual property. The group will include UNICEF Regional and Global experts. Programme Managers of the existing cash transfer programmes in Kenya will also be invited.

The research will use **robust research methods** to identify causal links. Randomised Control Trial, cohort study and or observational research designs should be proposed as the expert research firm judges feasible. Justification for the selected design and techniques for data collection and analyses should be included in the proposal. Implications for policy, programs and future research will be considered and described as well. Where possible, the proposed design should provide comparators to already existing research in the area, if possible repeating previous designs for compatibility. In addition, the research team will undertake to document any aspects of the program relevant to gender (for example, with respect to participant households). The proposed design should capture the causal links between the interventions and impact with appropriate methods such as indicators to compare the outcomes for different cohorts. The research will include observations of who in the household owns the additional cash transfer and who receives the nutritional counselling and how this relates to behaviour. The proposed design needs to define the methodology clearly to assess the causal relationships and pathways between counselling and behaviour. The methodology will include research methods to capture links between the NICHE programme and behaviour change such as Maternal Child Health changes in feeding practices and utilisation of health and nutrition services.

The methodology will propose a consistent timeframe for collecting the results after the cash payment is made as existing literature indicates that behaviour change varies 2-3 weeks after payment. The timeframe needs to be explicitly mentioned. Seasonal changes also result in marked differences in food access and this needs to be considered in the design. Frequency of reporting also needs to be clear (ie monthly or quarterly).

The Research will be carried out over a period of 23 months with these operational phases and an overall final report covering all phases:

**Inception**

**1.** Phase 1 – Rapid literature review of existing national and international literature around nutritional outcomes, impacts and cash transfers

**2.** Phase 2 – Work with the Implementation Consultancy to understand the NICHE programme and advise on targeting and sampling

**3.** Phase 3 – Propose research designs to the advisory committee which can be used for baselines and assessing impact (Randomised Control Trial if possible)

**4.** Phase 4 – Apply for Ethics permission of protocol and manage approvals

**Implementation**

**5.** Phase 5 –Implement Research including managing data collection in Kitui and analysis through relevant software package with primary and secondary data collection

**Reporting**

**6.** Phase 6 – produce a research report (including abstract) with findings for the Advisory Committee to be modified based on feedback

**7.** Phase 6 – Dissemination of research findings internally to UNICEF and externally as guided by UNICEF

**Publishing**

**8.** Phase 7 – Publish papers with UNICEF as owners of the data, research and information.

The final product delivery phase will involve drafting, review and finalization of the project deliverables including the research report covering all phases and power point presentation. The report of preliminary findings should be developed and shared with UNICEF, Implementing Partners and government partners, and the Advisory Committee which will provide the implementers an opportunity to provide additional information and feedback to the research team. Subsequent to that, the final research report will be completed.

**NICHE RESEARCH WORKPLAN**

***Expected results and deliverables***

A detailed evidence-based mixed-methods methodology for the research (overall protocol with country-specific work plans, as applicable), research design matrix and timeline will be outlined in an **Inception Report** to be approved by both UNICEF and NICHE, through the Advisory Committee. The inception report should also include:

- Literature review
- Proposed research designs with preferred options
- Plans for stakeholder involvement
- Detailed research protocol for the preferred research design
- Plans for compilation and collection of data by phase, with stated software
- Plans for Ethics permission, in line with national policy
- Plans for analysis and synthesis of data
- Plans to assure ethical research standards

Maintain **ongoing communication** with UNICEF Kenya Nutrition and Social Protections teams

based in Nairobi to provide input on the proposed research implementation once the research design has been approved and the ethics approval secured.

Draft and finalize **tools for primary data collection** activities by phase. **Collect data and analyse** for each phase. Record routines devised and executed for data collection, data processing, quality assessment, data analysis and other activities, if requested. **Draft research reports** summarizing the research methodology and findings for all Phases, including management of consent and study drop outs.

The research reports should also include lessons learned (for example, on what worked and what did not work, and the challenges and successes, and how well UNICEF mitigated risks and what the overall challenges were) and recommendations for improved programming, as well as an assessment of the extent to which resources were appropriately allocated and utilized.

The contractor will carry out the research in conformity with the:

**"WHO/AHPSR Implementation Research Guide"**
http://who.int/alliance-hpsr/alliancehpsr_irpguide.pdf
All implementation research reports will present:

- ✓ Abstract
- ✓ Background & object of research,
- ✓ Purpose,
- ✓ Objectives and scope,
- ✓ Methodology,
- ✓ Results,
- ✓ Discussion,
- ✓ conclusions,
- ✓ recommendations and
- ✓ lessons learned

separately and with a clear logical distinction between them. Findings will be expected to flow logically from the analysis of the data, showing a clear line of evidence to support the conclusions. Conclusions should be substantiated by findings and analysis. Recommendations and lessons learned should follow logically from the conclusions. Any assumption underlying the analysis should be made explicit.
Revised **final research reports** based on feedback received for Phase 1, interim research reports, and then final overall report for all Phases.

**Dissemination Plan**
Applications will include a research dissemination plan which will follow the format below. The dissemination plan will include a presentation to the advisory group and a launch of the published research to a wider group of stakeholders.

| **Publication** | | |
|---|---|---|
| | **Quantity in each language** | **Budget** |
| **Editing, Translating, Design and Printing** | | |
| **Other materials** | | |

| | Target audiences | Quantity in each language | Budget |
|---|---|---|---|
| **1.** | | | |
| **2.** | | | |
| **Activities** | | | |
| | **Target audience** | **Timeline** | **Budget** |
| **External** | | | |
| **1.** | | | |
| **2.** | | | |
| **Internal** | | | |
| **1.** | | | |
| **2.** | | | |
| **3.** | | | |

### 3. EXPECTED DELIVERABLES & ESTIMATED TIMELINE

**This table is to be revised and completed with your application.**

| **Outputs/ Deliverables** | **Est Date Due** | **Payment Schedule** |
|---|---|---|
| **Inception Phase 1-4** | Sept 2016 | |
| Rapid Literature review and development of theory of change conceptual framework | | 25% payment of signing |
| Detailed evidence-based methodology for the research design and timeline | | |
| Following feedback, modify and finalize the work plan, protocol, and timeline | | |
| Ethics permission approval | | |
| Development of tools for primary data collection. | | |
| **Phase 5** | | |
| Data collection | | 25% payment |
| Data Analysis | | |
| Prepare draft Phase 1 report including methods, limitations, findings, discussion and implications | | |
| Prepare final Phase 1 report based on feedback received on initial report | | |
| **Phase 5** | | |
| Data collection Phase 2 Research | | 25% |
| On-going analysis of Phase 2 Research | | |
| Prepare interim reports including methods, limitations, findings, discussion and implications for implementation research | | |
| **Phase 6 and Final Report** | March 2018 | Final payment upon acceptance of final report for Phases 6 and dissemination |
| Prepare draft final E&IR report of all phases including methods, limitations, findings, discussion and implications | | |

| | | |
|---|---|---|
| Prepare final evaluation and implementation research report on Phases based on feedback received on draft report | | |
| Presentation of evaluation findings in Kenya | | |
| Presentation of evaluation findings in New York | | |
| Prepare and submit final report to UNICEF for Phases 1-6 | | 25% |

## 4. KEY SKILLS, TECHNICAL BACKGROUND, EXPERIENCE REQUIRED

The research team will preferably be based at either a university or a research organization and should adequately demonstrate the availability of high caliber expert/s in the evaluation of large-scale child health programs in developing countries. The consultant team should have skills in social cash transfers, nutrition expertise and research.

*Key skills required of the lead consultant include*:

Mandatory

- a Masters (required) or Advanced Degree (Ph.D. desirable) in monitoring and evaluation, epidemiology, statistics, public health or demography
- at least 10 years of progressively responsible professional work experience at national and international levels in conceptualizing, designing and implementing evaluations and/or research of large-scale child health and nutrition-related programs in developing countries, including experience with both quantitative and qualitative research methods
- Experience in social protection and nutrition programming
- strong or proven (at least 5 to 8 years) experience with child health and nutrition programs in low and middle income countries
- proven publication record, preferably in peer reviewed journals
- demonstrated ability to produce high quality evaluation and/or analytical research reports
- Organisation based, or has offices, in Kenya or partnerships in Kenya

Strongly Desired

- familiarity with UNICEF's work and Kenya
- excellent spoken and written fluency in English
- proficiency in various MS Office applications (Excel, Word and Powerpoint, statistical package such as SPSS or SAS).

*Key skills of the research team members:*

Mandatory

- Post-graduate qualification or current registration for post-graduate study in monitoring and evaluation, epidemiology, statistics, or demography

Strongly Desired

- familiarity with UNICEF's work and/or the countries included in the evaluation
- excellent spoken and written fluency in English
- proficiency in various MS Office applications (Excel, Word and PowerPoint) and with statistical package such as SPSS or SAS.

All applicants matching the eligibility criteria are welcome, however as these are very specific terms of reference, international applications are expected.

## 5. Evaluation criteria

The evaluation procedure will focus on both technical and financial suitability. The weights of 70% and 30% shall be applied for technical and financial compliance respectively.
Only firms scoring at least 70% of the maximum score during technical evaluation will be considered for financial evaluation.

**Technical Evaluation Criteria**

1. Overall response - 10 points
    1.1 Completeness of response - 5 points
    1.2. Overall concord between RFP requirements and proposal - 5 points
2. Proposed Methodology and approach - 25 points
    2.1 Relevance and quality of proposed methodology - 15 points
    2.2 Project timelines and work plan - 10 points
3. Experience and qualifications of firm and key personnel - 35 points
    3.1. Company profile (establishment, facilities, personnel, financial capacity) - 5 points
    3.2 Experience in similar projects, i.e. real time learning and evaluations in developing countries, with specific focus on public health and nutrition - 15 points
    3.3. Relevance of qualifications & expertise of proposed team of consultants - 15 points

Total technical: 70 points
Financial evaluation: 30 points

**8. Content of technical proposal**

In order to ensure a relevant evaluation of proposals, technical proposals from institutions are expected to include, at a minimum:

- Introductory note
- Company profile and legal status. Submission of financial information (such as recent set of audited financial statements) would be welcome
- List of similar projects delivered, including detailed description of achievements/outcomes
- Customer references
- Proposed timeline/workplan
- Proposed methodology for each of the phases of the assignment
- Team of consultants proposed to carry out the assignment, including CVs with qualifications and expertise in similar projects.

**Conditions**

Terms and conditions will be set as per UNICEF regulations.

**Annex 1**

**About the NICHE Programme Model**

**The Nutritional Improvements through Cash and Education Programme (NICHE): a Programme of Nutrition Focused Social Transfers in the ASAL of Kenya, June 2015 Azim Manji**

The programme will use existing recipients of the Cash Transfers for Orphans and Vulnerable Children (CT-OVC) programme and Cash for Assets and will be informed by the Hunger Safety Net Programme. The existing recipients will also receive:

(i) Top up cash transfers to a selected number of beneficiaries who are already receiving either CT-OVC or Cash for Assets Programme under WFP in Kitui County;

(ii) Top up cash transfer plus enhanced nutritional counselling and related behaviour modification approaches over and above what routine Government social transfer programmes offer.

(iii) The third category of beneficiaries will remain only receiving cash transfers from the ongoing CT-OVC or NDMA/CFA schemes.

These three cohorts will be rigorously monitored to assess the outcomes and impact of the programme.

The Government counterparts will be the Social Protection Secretariat and the County Government of Kilifi. The NICHE consultant has developed the NICHE programme with both.

**Objectives of the Programme**

- Understand if cash can benefit food and nutritionally insecure households enough to improve nutrition outcomes under 2yrs for most vulnerable and marginalised populations as defined by the existing cash transfer programmes
- Understand the mechanisms which create any changes detected, for women and the first 1000 days of a childs life
- Use understanding of the programme to inform scale up for vulnerable households within the existing Kenyan cash programmes, to ensure rights for all, equity and a gender balance approach.

### 5.1 Expected outcomes of the NICHE Programme

The following are the expected Outcomes for the programme:

**OUTCOME 1**: An increase in the number of children who are fed in accordance with the World Health Organisation's Infant and Young Child Feeding guidelines;

**OUTCOME 2:** Increased use of high impact nutrition interventions (HINI) among participating households of the programme

**OUTCOME 3:** An improved awareness and utilisation of community health facilities to support better child growth and development among participating households of the programme.

**OUTCOME 4:** Increased awareness and understanding of practices resulting in improved nutritional uptake including the importance of hand washing and exclusive breast feeding

### 5.2 Expected Impacts

The following are expected Impacts for the programme:

**IMPACT 1:** An overall improvement in anthropometric measurements including height for age and weight for length Z scores;

**IMPACT 2:** An overall improvement in the quality of complementary feeding practices amongst under 2s in target beneficiary households where interventions have been modelled;

**IMPACT 3:** An increase in the dietary diversity at household and individual levels

**IMPACT 4:** An increase in exclusive breastfeeding rates in the first six months of life

The programme will be measured with process indicators (dietary quality, meal frequency), outcomes and impact (wasting and stunting) and changes in young child feeding practices.

Implementation of the project will be monitored through reports from the implementing Institution and will be evaluated within the evaluation processes of the whole EU SHARE Programme. The EU SHARE programme has a monitoring framework which includes the outcomes above and reports on against this framework to the donor annually. The EU SHARE programme will be externally evaluated by a consultant at the end of the four years programme and the NICHE programme will be included in this evaluation.

**References:**

1. Cash Transfers and Child Nutrition: what we know and what we need to know, Richard de Groot, et al, August 2015 UNICEF

2.Doing cash differently, How cash transfers can transform humanitarian aid, Centre for Global Development ODI 2015

3.Prevention of Acute Malnutrition: distribution of Special Nutritious Foods and cash and addressing underlying causes – what to recommend when, where, for whom and how. Saskia de Pee et al, Food and Nutrition Bulletin 2015
4. Financial Incentives and coverage of child health interventions: a systematic review and meta-analysis
5. Refani Pakistan Study, a Cluster Randomised Control Trial of the effectiveness and cost effectiveness of cash based transfer programmes on child nutrition status: a study protocol. Bridget Fenn et al, BMC Public Health 2015
6. NICHE Inception Report, Azim Manzi, UNICEF June 2015
7. Social Cash Transfers and Children's Outcomes; a Review of the Evidence from Africa, UNICEF 2015

**Requested by Chief of Nutrition Section**

Name
Grainne Moloney

Title: **Chief of Nutrition**

Signature

Date

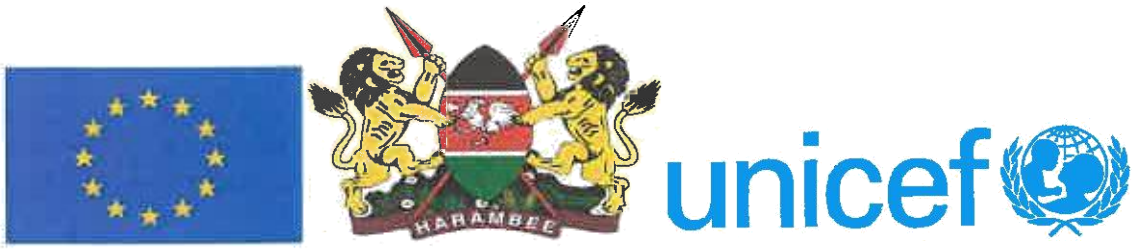
**Approved by Representative:**

Name

Pirkko Heinonen
Title: **Representative**

Signature

Date




# Terms of Reference for Institutional Contract for the Nutritional Improvements through Cash and Health Education (NICHE) Programme

## 1. IDENTIFICATION

| | |
|---|---|
| Description of Service | Nutritional Improvements through Cash and Health Education programme (NICHE) Implementation Consultancy |
| Expected start date: | March 2016 |
| Expected Completion date: | March 2018 |
| Reporting to: | Chief of Nutrition<br>MCNP Programme Manager |
| Technically Advised by: | Ousmane Niang, Chief, Social Protection |

## 2. BACKGROUND AND OBJECTIVES

Kenya has a long history of investing in social protection and adopted the National Social Protection Policy (NSPP) in 2012. The NSPP aims to strengthen the delivery of social assistance to poor and vulnerable populations. There has also been a growing trend towards cash transfers. Under the National Safety net programme, 4 social cash transfer programmes have reached more than 500,000 households in 47 Counties. Recent evaluations of social protection programmes show results, but not in anthropometric outcomes. Both Cash Transfers for Orphans and Vulnerable Children (CT-OVC) and Hunger Safety Net Programme (HSNP) show increases in consumption and dietary diversity for households but not in the weight and height of children in the first 1000 days.

There is evidence from Latin American countries that cash programmes can make anthropometric difference, particularly for stunting, for example 5-10% difference for programmes in Mexico and Nicaragua. The existing Social Safety net programme design in Kenya is based on the Latin American models.

The European Union / Ministry of Health SHARE programme commenced in November 2014. The overall objective of the programme is to significantly strengthen community resilience to handle shocks and stress through improved access, provision and monitoring of health, nutrition and sanitation status of the most deprived populations (women and children) in the counties under the Arid and Semi-Arid Lands (ASALs). The specific objective is to improve maternal and child nutrition of deprived communities in Mandera, Wajir, Turkana, West Pokot, Tana River, Samburu, Kitui, Kilifi and Kwale counties.

As part of the EU SHARE programme, UNICEF Country office aims to test that focusing on combining nutrition counselling with the existing cash transfer programme can improve nutrition outcomes. This test will consist of combining additional cash amounts and nutritional counselling within existing cash transfer schemes and closely monitoring the impact to households with pregnant women or those with children under 2years of age. Nutrition Counselling is a widely used strategy to improve nutritional status of pregnant and lactating women and their children under 2yrs. Nutrition Counselling focuses on:

- Enhancing maternal diet quality by increasing the diversity and amount of food consumed
- Promoting adequate weight gain through sufficient and balanced protein and energy intake
- Promoting consistent use of micronutrient supplements, food supplements of fortified foods.

According to WHO available evidence suggests that nutrition counselling may improve gestational weight gain, reduce the risk of anaemia in late pregnancy, increase birth weight and lower the risk of preterm delivery.

The evidence generated will then lead to influencing policy and potentially take successful models to scale given the Government of Kenya leadership on social protection programmes.

Kitui has been selected to pilot these cash transfers because the County is easily accessible, has high stunting rates (45% KDHS) and has existing cash transfer programmes. Kitui's stunting rates are the highest in Kenya (together with West Pokot).

In view of the above and with technical support from UNICEF, the Kitui County Government has developed the "Nutritional Improvements through Cash and Health Education" (NICHE) programme. This programme will use additional cash and nutritional counselling to model whether these approaches can positively change the nutritional status of women and children under 2yrs. The NICHE programme will be modelled in the most vulnerable wards of Kitui County first, using existing and established payment / disbursement mechanisms.

**Programme Model**

The programme will use existing recipients of the Cash Transfers for Orphans and Vulnerable Children (CT-OVC) programme and Cash for Assets and will be informed by the Hunger Safety Net Programme. The existing recipients will also receive:

(i) Top up cash transfers to a selected number of beneficiaries who are already receiving either CT-OVC or Cash for Assets Programme under WFP in Kitui County;

(ii) Top up cash transfer with nutritional counselling and related behaviour modification approaches over and above what routine Government social transfer programmes offer.

(iii) The third category of beneficiaries will remain only receiving cash transfers from the ongoing CT-OVC or NDMA/CFA schemes.

These three cohorts will be rigorously monitored to assess the outcomes and impact of the programme.

**Objectives of the Programme**

- Understand if cash can benefit food and nutritionally insecure households enough to improve nutrition outcomes under 2yrs
- Understand the mechanisms which create any changes detected
- Use understanding of the programme to inform scale up for vulnerable households within the existing Kenyan cash programmes.

### 1.1 Expected outcomes of the NICHE Programme

The following are the expected Outcomes for the programme:

**OUTCOME 1**: An increase in the number of children who are fed in accordance with the World Health Organisation's Infant and Young Child Feeding guidelines;
**OUTCOME 2:** Increased use of high impact nutrition interventions (HINI) among participating households of the programme
**OUTCOME 3:** An improved awareness and utilisation of community health facilities to support better child growth and development among participating households of the programme.
**OUTCOME 4:** Increased awareness and understanding of practices resulting in improved nutritional uptake including the importance of hand washing and exclusive breast feeding

### 1.2 Expected Impacts

The following are expected Impacts for the programme:

**IMPACT 1:** An overall improvement in height for weight and weight for length scores;
**IMPACT 2:** An overall improvement in complementary feeding practices amongst under 2s in target beneficiary households where interventions have been modelled;
**IMPACT 3:** An increase in the dietary diversity at household levels
**IMPACT 4:** An increase in exclusive breastfeeding rates in the first six months of life

The programme will be measured with process indicators (dietary quality, meal frequency), outcomes and impact (wasting and stunting) and changes in young child feeding practices.

## 2. SCOPE OF THIS ASSIGNMENT

Consulting services are required to define the specifics of the NICHE programme, develop an implementation plan with the Kitui County Government, the CT-OVCS and Cash for Assets stakeholders other partners including PSK who will deliver the nutrition counselling and establish the programme implementation. The programme will then be monitored by a research institution and be technically advised by UNICEF staff in Nairobi

## 3. METHODOLOGY

1. **Inception phase:** manage process of meeting stakeholders and understanding the NICHE Programme, the County vision, the CT-OVCS and Cash for Assets social protection programmes, the INGO implementers including PSK and Unicef's vision.

2. **Implementation design:** analyse the CT- OVC and NDMA/Cash for Assets (CFA) management information systems and advise what kind of data they can provide that can be used to target pregnant women, under 2yrs recipients, and their Mothers.
3. Based on the analysis of existing information sources, the implementation team need to design the information system for the NICHE programme. This information system needs to have specific information collection points so that data is collected systematically and be clear on outcome variables to measure impact and attribution. The implementation team will need to work with the academic research team to clarify this design. Baseline data at household level will be critical and should be from the existing model. Specific strategies for how to control for other factors that may impact on outcome variable should also be included.
4. Support Kitui County and the EU SHARE programme team to specify criteria for selecting/sampling participant households for the NICHE programme[1] and help to conduct targeting of households for the three model cohorts from among the existing CT- OVC and NDMA/Cash for Assets programmes and ensure /confirm that selected participating households have payment cards (either Equity Bank or KCB according to which transfer they are enrolled in)
5. As consistent selection of the target participating households is very crucial for assessing the impact of the programme, the implementing institution needs to develop a clear criteria for identifying poor households and be clear on whether to target defacto or dejeure members of the households with under 2yrs. The methodology proposed needs to be explicit about how the households will be sampled, when to follow up and how drop outs will be recorded and managed.
6. Based on the specific criteria identified, select participating households from the CT OVC and Cash for Assets databases for the three cohorts with the nutritional counselling cohort being in the target area of PSK who will provide the nutritional counselling, all participating households with under 2yrs in deprived areas of Kitui.
7. Advise on the financial amounts of the additional cash transfers, the length of time of the programme and the number of the participating households within the EU SHARE budget.
8. Develop and ensure agreement on the modality for transferring the additional cash and accounting mechanism to the participating households of the top up cash only (Cohort 1) and the top up cash plus nutrition programme (Cohort 2), in view of the fact that they already receive funds from either CT OVC or the NDMA/WFP Cash for Assets (CFA) programme.
9. Support the Kitui County Government and the CT OVC and NDMA/WFP Cash for Assets programmes to link the selected beneficiaries for Cohort 2 to the NGO that is delivering the nutritional services and monitor their uptake of those services.
10. **Programme Management:** Lead in the preparation of annual work plan for the NICHE programme including the milestone activities.
11. Ensure that community education programmes are developed and implemented to inform the participating households about the programme and that mechanisms to receive and act on grievances and complaints from participating households of NICHE programme are put in place, enforced and made known to the programme participating households.
12. Fully inform all stakeholders of the NICHE programme design.
13. Establish cash transfer process within existing programmes of CT OVCS and Cash for Assets.
14. Collaborate, cooperate and share full information with the Research consultancy for monitoring the outcomes and impact of the NICHE programme.

[1] The three planned cohorts of the NICHE programme are described in the programme model above. The beneficiaries' of NICHE should be the very poor, pregnant women or those having young children and other similar variables around them.

15. **Reporting:** Ensure quarterly progress reports for Unicef staff, the County, the Social protection programmes, the EU SHARE technical and advisory committees and research consultancy.

## 3. EXPECTED DELIVERABLES & ESTIMATED TIMELINE

| Outputs/deliverables | Estimated Duration (person days) | Deadline | Responsible |
|---|---|---|---|
| Produce an inception report within 15 working days of commencement of the assignment including interpretation of the assignment, proposed methodologies /approach, and work plan | Complete for application | May 2016 | Implementor |
| Develop an agreement with the institution conducting the research evaluation of the interventions, to guide working relationships | Complete during implementation | June 2016 | Implementor, UNICEF and County |
| Produce an implementation plan that outlines criteria for selecting/sampling beneficiaries for the NICHE programme; a rationale for the targeting of selected households for the three model cohorts; the financial modality for transfers, timeframe and cash amounts within the EU SHARE budget | Complete for application | June 2016 | Implementor |
| With the CT OVC programme and Cash for Assets produce a list of recipients, in conjunction with recommended targeting by research consultancy | Complete for application | August 2016 | Implementor |
| Document with agreed modality for transferring the additional cash and accounting mechanism to the beneficiaries of the top up cash only (Cohort 1) and the top up cash plus nutrition programme (Cohort 2) and liaise with PSK who will be supporting the linking of selected beneficiaries for Cohort 2 to the nutritional counselling. | Complete during implementation | August 2016 2016 | Implementor and PSK |
| Develop a work plan for the duration of the NICHE programme | Complete for application | August 2016 | Implementor |
| Documented mechanisms to receive and act on grievances and complaints from beneficiaries of NICHE programme. | Complete for application | August 2016 | Implementor |
| Stakeholder discussions on the work plans, proposed methodologies, etc. will be needed – can through the regular sector working group meetings or other arrangements | | | Implementor and UNICEF |
| Establish the NICHE programme with County Government and implementing partners, opening with a launch | Complete for application | September 2016 | Implementor and stakdholders |

| Outputs/deliverables | Estimated Duration (person days) | Deadline | Responsible |
|---|---|---|---|
| Project manage the implementation of the NICHE programme, establishing quarterly monitoring mechanism such as reviewing quarterly payroll and participating in programme visits of the implementing INGO. Produce quarterly monitoring reports for all stakeholders, including the research consultancy | Complete for application | March 2016-March 2018 | Implementors |
| Write a final report at the end of the two year NICHE programme capturing programme management progress, challenges, issues for consideration in scale up and recommendations for future programmes. | Complete for application | March 2018 | Implementor |

## 4. KEY SKILLS, TECHNICAL BACKGROUND, EXPERIENCE REQUIRED

The consultancy institution should provide either a team or an individual who all collectively have the following skills and qualifications:-

- Higher degree in Economics, Social Development, Social Protection, Social Sciences, Public Health, Project Planning and Management or related fields
- Minimum 8 years' working experience 4 of which should be in planning and implementation of social transfer programmes in developing countries.
- Knowledge of children's' rights, gender equality and human rights based Frameworks, and understanding of an equity based approach
- Experience in project management or public services management, preferably in health care and social protection/ social welfare sector
- Proven ability to: (i) handle multiple tasks under pressure with short deadlines; (ii) ability to work independently, seeking guidance on complex issues; and (iii) excellent interpersonal skills, proven team orientation and the ability to work across unit boundaries.
- Proven track record as a team member or/and a team leader
- Knowledge of approaches to modelling, monitoring and evaluation
- Computer literate.
- Excellent communication, facilitation, and writing skills

## 5. Evaluation criteria

The evaluation procedure will focus on both technical and financial suitability. The weights of 70% and 30% shall be applied for technical and financial compliance respectively.

Only firms scoring at least 70% of the maximum score during technical evaluation will be considered for financial evaluation.

**Technical Evaluation Criteria**

1. Overall response - 10 points

    1.1 Completeness of response - 5 points

1.2. Overall concord between RFP requirements and proposal - 5 points

2. Proposed Methodology and approach - 25 points

2.1 Relevance and quality of proposed methodology - 15 points

2.2 Project timelines and work plan - 10 points

3. Experience and qualifications of firm and key personnel - 35 points

3.1. Company profile (establishment, facilities, personnel, financial capacity) - 5 points

3.2 Experience in similar projects, i.e. real time learning and evaluations in developing countries, with specific focus on public health and nutrition - 15 points

3.3. Relevance of qualifications & expertise of proposed team of consultants - 15 points

Total technical: 70 points

Financial evaluation: 30 points

**6. Content of technical proposal**

In order to ensure a relevant evaluation of proposals, technical proposals from institutions operating in Kenya are expected to include, at a minimum:

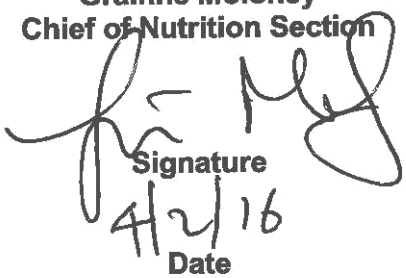
- Introductory note
- Company profile and legal status. Submission of financial information (such as recent set of audited financial statements) would be welcome
- List of similar projects delivered, including detailed description of achievements/outcomes
- Customer references
- Proposed timeline/workplan
- Proposed methodology for each of the phases of the assignment
- Team of consultants proposed to carry out the assignment, including CVs with qualifications and expertise in similar projects.

**Conditions**

Terms and conditions will be set as per UNICEF regulations.

**Requested by Chief of Nutrition Section**

**Grainne Moloney**
**Chief of Nutrition Section**



**Signature**

4/2/16

**Date**

**Signed by Chief of Social Policy Section**

**Ousmane Niang**
**Chief of Social Policy**

Approved as discussed during Thursday.

**Signature**

**Date**

05/02/16.

**Approved by Representative:**

**Name**

**Pirkko Heinonen**

**Title: Representative**

**Signature**

**Date**


Kimetrica™