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| **CARE INTERNATIONAL in ZAMBIA** |
| Endline Evaluation |
| **NUTRITION AT THE CENTRE (N@C) PROJECT IN LUNDAZI AND CHADIZA DISTRICTS OF EASTERN PROVINCE** |
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|  |
| **October 2017** |

# **Terms of Reference: Consultant**

**Nutrition at the Center – Endline Evaluation in Lundazi and Chadiza Districts of Eastern Province**

1. **INTRODUCTION**

Maternal and child malnutrition continues to be one of the leading causes of mortality and morbidity in developing countries. Despite gains globally, undernourishment in the developing world remains high especially in southern Asia and sub-Saharan Africa (34% and 34.2% of the population, respectively).[[1]](#footnote-1) Approximately 870 million people are estimated to have been undernourished in the period 2010-12 with consequences that affect each stage in the lifecycle and across generations.[[2]](#footnote-2) Nutrition has come to the forefront of global health and development, with an increasingly expanding body of evidence linking poor maternal and child nutritional status to impaired cognitive development, and impaired human capital later on in life. Malnourished mothers are more likely to die in childbirth and have low birth weight babies who, in turn, face higher mortality rates and increased risk of acute and chronic diseases[[3]](#footnote-3). Stunted children face lifelong consequences in reduced mental capacity, lower retention in school and reduced lifetime earnings.[[4]](#footnote-4)

Narrow sectorial strategies will not solve the problem: social and behavior change strategies without the availability of sufficient nutritious food will be of limited benefit. Other obstacles such as poor absorption of nutrients resulting from chronic gut damage (environmental enteropathy), or low empowerment of women to purchase adequate food for her children or make decisions that affect the family’s heath, may further limit the overall impact of nutritional interventions. Finally, women who are themselves undernourished are more likely to give birth to preterm babies and less able to support their health and nutrition.[[5]](#footnote-5)

In addition to addressing nutrition holistically and in a multi-sectorial approach, the Lancet, a scientific peer-reviewed journal has highlighted nutrition-sensitive programs as a novel and promising platform for delivering nutrition-specific interventions, which are interventions addressing more immediate determinants of nutrition[[6]](#footnote-6). Finally, approaches have been incorporated through efforts by multi-lateral organization and host countries. The new Scaling-Up Nutrition program funded by the United Nations includes over 50 out of 58 countries in Africa and Asia and couples nutrition specific interventions with complementary strategies addressing issues such gender inequality, food security and social protection, and access to safe water[[7]](#footnote-7).

Nutrition at the Center (N@C) combines best practices together with country-specific needs to implement and evaluate an integrated approach to maternal and child nutrition, which includes activities related to strengthening

(1) Infant and young child feeding (IYCF) and maternal nutrition practices

(2) Food security

(3) Water, sanitation and hygiene (WASH) practices

(4) Women’s empowerment and

(5) Maternal health

This integrated approach will yield a significant sustainable impact for families and communities and validate the effectiveness of CARE’s women and community-centered programmatic approach.

1. **Background**

As a global organization, CARE seeks to increase organizational and global commitment to effectively address the critical issues of hunger and malnutrition. Our vision is a world where malnutrition has been substantially reduced and where disparities in hunger have been eliminated between the poorest of the poor and those who are relatively more well off. This vision is grounded in our core belief that all children have a right to the best possible start in life and to optimal health, development and well-being.

Nutrition is part of CARE’s larger Food and Nutrition Security portfolio, which aims at reaching 50 million people by 2020. With generous support from the Sall Family Foundation, CARE has implemented the 4 country, 5 year integrated Nutrition program, Nutrition at the Center, since April 2013. The program aims at reducing stunting among children under 36 months.

**Zambia**2007 national statistics in Zambia indicated 45% of under-five children were stunted, and 21% were severely stunted. Prevalence of wasting was at 5% of children under five, with the highest prevalence among children 9-11 months of age (12%). Maternal nutrition has strong implications for children’s nutritional status.

1. **PROGRAM GOALS AND OBJECTIVES:**

The goal of Nutrition at the Center is to improve the nutritional status for women (15-49) and children less than 3 years of age in identified resource poor geographical areas. Program objectives aim to:

* Improve nutrition-related behaviors
* Improve use of maternal and child health and nutrition services
* Increase household adoption of appropriate water and sanitation practices
* Increase availability and equitable access to quality food

The results framework of N@C can be found in ***Annex 1.***

1. **OBJECTIVES OF THE EVALUATION**

The purpose of the endline survey is to collect quantitative information on nutrition-related topics and be able to measure achievement/impact of the program during the Final Evaluation. Nutrition-related topics include: infant and young child feeding practices, food security, child nutritional status, maternal nutrition, WASH, and women’s empowerment. Households with women of reproductive age (WRA) (ages 15-49) and **children under three** in the sample areas will be eligible for inclusion in the survey.

The impact indicators for N@C are as follows:

* Reduction of stunting among children under 3 years of age

The consultant in collaboration with the respective CARE country office will review and agree upon the specific indicators as well as appropriate disaggregation and stratification for reporting endline results. This includes:

* IYCF practices
* Current nutritional status among children 0-36 months of age and among WRA
* Household food security status
* Household WASH practices
* Women’s empowerment and household food security issues as a part of the factors involve in the project context.
* Lessons learned for future programming.

1. **Final Evaluation**

Final evaluation of the project is planned to take place in Zambia from November – December 2017

Objectives of the evaluations are;

1. To provide an objective assessment of the achievements and results, weaknesses and strengths of the project,
2. To document evidence, lessons learned and good practices per country and globally to inform future nutrition programming.
3. **The Final Evaluation will attempt to answer the following:**
4. **Integrated Approach to Nutrition**

If an integrated program model approach is effective in reducing stunting, and how successful the project was in addressing the barriers affecting a) water, sanitation and hygiene practices, b) food security and access to nutritious foods, c) access to and utilization of health services, d) gender equality by addressing gender based violence and e) changes in maternal, infant and young child nutrition behaviors and practices. Assessment of the impact of participation in all program core interventions will determine any synergistic effect of the project’s integrated, multi-sectoral approach.

1. **Intervention Effectiveness:**

Using qualitative information key informants including, program staff, program participants and non-participant and quantitative end-line data, to generate triangulated evidence to evaluate the effectiveness of core program interventions.

1. **Sustainability:**

Qualitative and quantitative evidence will provide insights into its likely sustainability and potential for scale-up. This will include interviews with government representatives and other stakeholders to assess the influence and uptake of program interventions into existing platforms and systems as well as strengthened capacities of local or national actors to adopt N@C proposed interventions or scale them up.

Following baseline, final end-line survey will also include the following information:

|  |  |  |
| --- | --- | --- |
|  | **Survey Module** | **Key Sections** |
|  |  |  |
|  | Basic Information | Basic household information and characteristics |
|  |  | Participation in community and program groups |
|  | Infant & Young Child Feeding Practices (IYCF) | Timely Initiation of breastfeeding |
|  |  | Exclusive breastfeeding (< 6) m |
|  |  | Child complementary feeding; minimum dietary diversity; minimum meal frequency; minimum acceptable diet and  Mother’s dietary diversity |
|  |  | Infant/Child anthropometry (< 3 years) |
|  |  | Maternal anthropometry (15-49) years |
|  |  |  |
|  | Health systems accessibility | Utilization of health services by project participants |
|  |  |  |
|  | Food Security and Agriculture Extension | Food preservation and storage |
|  |  | Participating household’s access and use of agriculture extension services |
|  |  | HH Food Insecurity (measure of food access) |
|  |  |  |
|  | Water, Sanitation and Hygiene | HH handwashing practices |
|  |  | Household access to water and sanitation & hygiene practices |
|  |  | Practice to make water safe for drinking |
|  |  | Women’s participation in household decision making |
|  |  | Gender Attitude and Belief -- Tolerance of Intimate Partner Violence |
|  |  |  |

**Source:** N@C Endline Survey 2017

1. **Methodology**

Data collection instruments and data collection procedures, including anthropometry assessment will be identical to those of the initial baseline survey. A local/national consulting firm will be recruited to conduct end-line data collection and analyses working in coordination with CARE Zambia and N@C headquarters’ technical support team, CARE USA.

Qualitative key informant interviews will help enhance our understanding of the project’s intervention participation and effectiveness and will further allow triangulation with quantitative findings.

1. **EVALUATION ACTIVITIES**

All activities will be coordinated with CARE, Zambia and CARE USA headquarters’ staff. The Program Manager from CARE Zambia will be in regular communication with the hired consulting firm in order to coordinate the implementation of evaluation activities; additionally CARE USA will also participate/support this process. Consultant will assume responsibility for implementing the following activities:

* 1. Hire enumerators and enumerator team supervisors with approval from CARE, Zambia office and in coordination with CARE USA. Each team should have 1 team supervisor to ensure quality.
  2. Translate survey instrument into the local language
  3. Provide survey instrument interview training in coordination with CARE Zambia, and CARE USA staff
  4. Assist and secure IRB approval
  5. Assist with the acquisition of height/weight boards for children, weighing scales for mothers.
  6. Conduct N@C endline survey using the provided sampling design and endline questionnaire
  7. Will use ODK software to program tablets for electronic data collection
  8. Assure data quality during field data collection in coordination with CARE Zambia office
  9. Provide electronic version of any field notes or observations during data collection to CARE Zambia office
  10. Export complete data and provide endline data set to CARE USA in SPSS format (.sav)
  11. Conduct basic frequency and cross-tab analysis as needed; any bar charts as needed
  12. Write and submit complete endline report using provided analysis plan to CARE Zambia office and CARE USA.

1. **DELIVERABLES**

The consultant will submit to CARE Zambia and CARE USA the following:

1. Final English version of endline questionnaire (including any changes) from the provided standardized questionnaire
2. IRB approval (complete application package)
3. Final endline schedule, and training materials used and provided to enumerators during training sessions.
4. Manage and supervise data entry (only if un-able to do electronic data collection)
5. A cleaned complete data in SPSS (.sav) format with definitions and associated codes (value labels) to CARE USA.
6. Any syntax used to clean the data (.sps)
7. Any syntax used for initial analysis
8. Final analysis and complete written report with needed annexes

***Table 3 - Final Evaluation time-line***

| ***Pre-evaluation preparation activities include*** | *Sept 2017* | *Oct 2017* | *Nov 2017* | *Dec 2017* | *Jan 2018* | *Feb 2018* | *Mar 2018* | *Apr 2018* | *May 2018* | *June*  *2018* |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Develop scope of work | *X* |  |  |  |  |  |  |  |  |  |
| Recruit consultants |  | *X* |  |  |  |  |  |  |  |  |
| Review of baseline reports and other program documents | *X* | *X* |  |  |  |  |  |  |  |  |
| Determining sample size, including inclusion and exclusion criteria for each target group in both intervention and control sites | *X* |  |  |  |  |  |  |  |  |  |
| Design of survey instruments and purchase of equipment | *X* | *X* |  |  |  |  |  |  |  |  |
| Pre-testing and Refine of survey tools |  |  | *X* |  |  |  |  |  |  |  |
| Seek ethical approval from governments | *X* | *X* |  |  |  |  |  |  |  |  |
| **Final evaluation activities** |  |  |  |  |  |  |  |  |  |  |
| Selection and training of data collection/ field staff |  | *X* |  |  |  |  |  |  |  |  |
| Data collection / field work, including;   * interviews; anthropometric measurement children and women |  |  | *X* |  |  |  |  |  |  |  |
| Quality Control - monitoring and supervision; data reporting |  |  | *X* | *X* |  |  |  |  |  |  |
| Data cleaning/entry and data export (.sav) |  |  |  | *X* | *X* |  |  |  |  |  |
| Data analysis and report of findings |  |  |  | *X* | *X* |  |  |  |  |  |
| Dissemination of program evaluation findings |  |  |  |  |  |  |  |  |  |  |

1. **PROPOSAL REQUIREMENT**

A technical and cost proposal on the basis of this Terms of Reference (ToR) is requested from the consultant or consulting firm. The proposal should contain:

1. Detailed plan of action for field work indicating staff-days required
2. Specific roles and responsibilities of the team leader, supervisory chain and other core members of the evaluation team.
3. Schedule of key activities.
4. Detailed budget in Zambian Kwacha with justification.
5. Updated CV of Team Leader and other core members of the Evaluation Team
6. A profile of the consulting firm (including a sample report if possible)

## Qualifications

The interested consultant should have a long history of experience in public health and nutrition with preferred background experience and ability to train and supervise quality anthropometric data collection. He/She must have the following skills and qualifications:

* + Expertise on quantitative and qualitative data collection and analysis
  + Sound knowledge and practical experience in fields of social sciences and nutrition
  + Proven ability to manage large teams of enumerators
  + Track record of conducting interviews and facilitating focus groups
  + Experience with using digital data collection for similar surveys
  + Experience designing databases, performing data entry and data analysis
  + Ability to supervise and manage data entry for quality control
  + Practical experience of using statistical method like SPSS or STATA
  + Desired experience with qualitative software such as Nvivo or the like

## Ownership and Disclosure of Data/Information

All documents, project designs, drawings, data and information shall be treated as confidential and shall not without the written approval of CARE be made available to any third party. In addition, the consultant(s) formally undertakes not to disclose any parts of the confidential information and shall not, without the written approval of CARE be made available to any third party. The utilization of the report is solely at the decision and discretion of CARE. All the documents containing both raw data/materials provided by CARE and final report, both soft and hard copies are to be returned to CARE upon completion of the assignment. All documentation and reports written as, and as a result of the research or otherwise related to it, shall remain the property of CARE. No part of the report shall be reproduced except with the prior, expressed and specific written permission of CARE.

Interested applicants should submit their CV with financial and technical proposals by Friday 20th October, 2017 to:

Director – Program Support Services

CARE International in Zambia,

Plot no. 7 Chitemwiko Close,

Kabulonga,

**P.O. Box 36238, LUSAKA**

Electronic copies of both Technical and financial proposal must be concurrently submitted to the following email address; [silungwem@carezam.org](mailto:silungwem@carezam.org), [chibambulam@carezam.org](mailto:chibambulam@carezam.org) , [pongolanic@carezam.org](mailto:pongolanic@carezam.org) and [kapatal@carezam.org](mailto:kapatal@carezam.org)

1. **CARE CONTACTS**

For specific information and queries about the consultancy, kindly contact:

Catherine Pongolani, Project Manager, Cell number: +260 977 712 326

1. **PROTOCOL FOR QUESTIONS AND CONTACT**

Any **technical questions** arising during the preparation of your response to this call are encouraged and should be submitted in writing via email to (Country program manager - Nutrition at the Center); Esther Choo ([esther.choo@care.org](mailto:esther.choo@care.org)); Technical Advisor, FNS, CARE USA and Noor Tirmizi, ([ntirmizi@care.org](mailto:ntirmizi@care.org)), Senior Technical Advisor, Food and Nutrition Security Unit, CARE USA.

All questions must be submitted in the following format:

1. State original TOR statement or requirement
2. State Vendor question

Each inquiry should cite the particular paragraph/page number. Every attempt will be made to provide answers within two (2) business days.

**Annex 1**



**Annex 2**

**Sample size**

The survey is a cross-sectional observational study. The data will be collected from Children aged 0-36 months and their mothers or primary care takers. The sample will require the needed sample numbers in (0-5), (6-11), (12-17), (18-23 and (24-36) age groups for IYCF, and anthropometric indicators. The sample size was calculated using prevalence of key infant and young child feeding (IYCF) practices, and target percent point changes expected to take place at the end of proposed intervention. CARE’s proposed intervention is estimated to **improve stunting** among participating children by **9 percentage points** at end of the program. For sample size estimation, prevailing baseline rate was set at P0 = 45% and expected rate of change at P1 = 36% (DHS 2011). Using a significance level of 5%, power = 80%, difference between baseline and endline rates is at 9 percentage points, and a design effect of 1.2 the study will require a sample of 440 in (6-35.9) months age group to capture stunting in the peak age groups in the intervention and comparison areas respectively.

For the **IYCF** indicators, **exclusive breastfeeding (EBF)** is used as the key indicator for sample size determination. For sample size estimation, prevailing baseline rate was set at P0 = 61% and expected rate of change at P1 = 74% (DHS 2011). Using a significance level of 5%, power = 80%, difference between baseline and endline rates is at **13 percentage points**, with a design effect of 1.2, the study will require a sample of 193 children each in *age* groups (0-5), and 110 children in the *age* groups of (6-11), (12-17), (18-23) and (24-35.9) months of age. Thus, a sample of 633 (110x4=440+193) children each is required in intervention and comparison areas respectively. Thus, for both intervention and control the needed total sample size for this study is 1266 (633x2).

**Study Design**:

The study follows a quasi-experimental design. Quasi-experimental designs use an intervention and comparison group, but assignment of the participants to the groups is non-random. Identified comparison group serves as “*counterfactual*” that is what would have happened in the absence of the program.

**Inclusion and exclusion criteria for women and children**

Inclusion criteria for children

* + Children 0-36 months of age
  + Children who permanently live with family members in households in the selected districts that were selected for the CARE program.

Exclusion criteria for children

* + Foster children, or children visiting the household, or who are not permanent residents
  + Children with any known or suspected chronic or congenital diseases or physical deformity that is associated with growth problems.

Inclusion criteria for women

* + Women of 15-49 years of age who are non-pregnant and have at least one child less than 3 years of age.
  + Women who permanently reside in the households in the selected survey districts.

Exclusion criteria for women

* + Any women 15-49 years of age living in the sub-districts for less than 6 months
  + Women younger than 15 years of age or older than 49 years of age
  + Women with any known or suspected chronic or congenital disease

Study Population:

Women 15-49 years of age, who have given birth within the last 36 months, whose child is currently living and they permanently reside in the selected districts. Child population under 3 years of age, residing in the selected districts with their mothers or primary caregivers who are area permanent residents.

**Sampling Frame:**

The sampling frame for the nutrition at the center survey was constructed using Health Facility Catchment Area population data within the selected intervention and control districts. CARE Zambia staff collected the Health Facility Catchment area population data using government census, district and local office sources for the districts of Lundazi and Chadiza districts. 22 intervention Health Facility Catchment areas and 24 comparison Health Facility Catchment areas with a total population of 462,690 provided the sampling frame.

## Selection of participants:

Nutrition at the Center Survey**:** A population based survey will be conducted with a total sample of 1266 women who have given birth within the last 36 months, whose child is currently living, and they reside permanently in the selected districts. Across the Health Facility Catchment Area within the selected districts, a probability proportional to size (PPS) sample of 633 women in the intervention HF Area, and 633 women in the comparison HF area will be drawn, which in turn provides the total number of women to be interviewed within each Health Facility Catchment Area.

Upon arrival in each sampled HF area, a community meeting will be held (pre-arranged by CARE Zambia) to inform community members of the purpose of the data collection and provide a forum for the community to ask questions to the team. After identifying a random start point at the center of the HF Catchment area, data collectors will spin a bottle to point the direction of the first household to visit. Within each household, we have proposed to interview one women who has given birth in the last 36 months if possible. Data collectors before the interview will ask the household to ensure that the household has not already been interviewed/visited by other data collectors. Data collectors will ask if there is a woman present who has given birth within the last 36 months and is the child is living with her in the household. In the event that there are multiple women present who have given birth in the last 36 months, the data collectors will *randomly* choose a mother to be interviewed using a simple algorithm, such as the Kish grid. The eligible woman from the household will then be interviewed after giving consent. If there are no eligible women in the household, data collectors will proceed to the next household. The survey will take approximately 1 hour per household. The survey will be completed by the data collector by filling in the prepared verified survey tool. There will be no audio recording involved in obtaining survey responses.

**Data Entry and Management:**

Collection of data in the field

Each of the survey teams comprised of at-least 2 Field Research Assistants (FRAs)-one male and one female. The team, as noted earlier move to the center of the HF area and then move outwards toward the edges of the HF catchment area. The team ensures mother's eligibility and after obtaining consent to participate will be interviewed. Socio-demographic information, feeding practice for the young children, status of household food security, and women’s participation, water, sanitation and hygiene, environmental enteropathy, food production and consumption, and anthropometric information will be collected. Weight and height of the children and mothers will be measured using an electronic digital scale (Tanita, HD 318), with 100 gram of precision. Mother and Child's weight will be taken together, followed by the weight of the mother **only**, and the child’s weight will be obtained by subtracting the latter from the former. Child’s length will be measured using locally made wooden length board. Mother’s height will be measured using locally made wooden height board.

**Quality control**

After a day’s work in field, troubleshooting sessions will follow to sort out any confusion or clarifications if any, led by the Field Supervisor or Research Officer. Each interviewed questionnaire will be cross-checked by another interviewer, to check for completeness, errors, missing fields or any other possible inconsistencies. The investigators/supervisors of the contracting firm will pay routine visits to supervise anthropometry sessions. Should any issues arise at any stage of data collection, they will help resolve the issues accordingly. Based on their field observations they can provide a general briefing to improve the quality of interviews, anthropometry. Survey team will make up for the rejected questionnaires within 7 days if needed.

**Data Entry:**

Contracting firm will use ODK based platforms for data collection and upload to a central server, that the firm's staff has the needed expertise and proficiency. A supervisor will ensure data quality by implementing needed checks. Daily frequencies on the portion of data entered will help control for duplications, or missing data.

Contracting firm after completing the data entry will provide CARE Zambia and the CARE HQ, Atlanta USA, a clean dataset copy in SPSS format in English language. The firm will ensure complete database retention and safety for the minimum recommended length of time.

1. Food and Agricultural Organization of the United Nations, the State of Food Insecurity in the World. 2017. [↑](#footnote-ref-1)
2. Food and Agricultural Organization, World Food Insecurity and Malnutrition: Scope, Trends, Causes and Consequences. Ftp://ftp.fao.org/docrep/fao/010/ai799e/ai79902.pdf [↑](#footnote-ref-2)
3. World Health Organization, Essential nutrition actions: improving maternal, newborn, infant and young child health and nutrition. 2013 [↑](#footnote-ref-3)
4. Ibid [↑](#footnote-ref-4)
5. Robert Black, Maternal and child undernutrition: global and regional exposures and health consequences. Lancet, 2008 [↑](#footnote-ref-5)
6. Ibid [↑](#footnote-ref-6)
7. Noreen Mucha, Implementing Nutrition-Sensitive Development: Reaching Consensus. November 2012 [↑](#footnote-ref-7)