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# Fill the Nutrient Gap Kenya for UCB Pilot

Report



September 2022

This summary and further information can be found electronically at: [wfp.org/fillthenutrientgap](http://wfp.org/fillthenutrientgap)



### **Suggested citation:**

World Food Programme. Fill the Nutrient Gap: Kenya Universal Child Benefit. Report. Nairobi, Kenya 2022.

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# Executive Summary

## Background

Over the past decade, Kenya has established itself as a progressive leader in universal social protection. Since 2019, the State Department of Social Protection has led efforts to establish the Universal Child Benefit (UCB), which would guarantee a monthly cash transfer to households with children under 3 years of age. Between November 2021 and November 2022, the National Social Protection Secretariat (NSPS), in partnership with UNICEF, Save the Children, the World Food Programme (WFP), the government of Sweden and the Joint SDG Fund, implemented a pilot UCB in Embu, Kisumu and Kajiado counties under which households received Kenyan Shillings (KES) 800 per child per month. In 2022, the NSPS and WFP conducted a Fill the Nutrient Gap (FNG) analysis as part of a series of activities intended to generate evidence and build advocacy capacities in support of the UCB. The FNG corresponds to direct objectives of the UCB pilot because it aims to generate lessons for the introduction of a long-term UCB, including the potential impacts of the cash transfer and complementary services on children's nutrition, and to strengthen advocacy efforts and visibility for the UCB.

## Process and methods

The FNG analysis estimated costs of three diets: energy-only, nutrient-adequate, and healthy, as well as the percentages of households that, given current food expenditure, are unable to afford each diet. The costs of energy-only and nutrient-adequate diets are estimated using the linear optimization software, Cost of the Diet (Save the Children UK), and the healthy diet cost is based on the methodology defined by the Food Prices for Nutrition team (Tufts University).

Diet costs and non-affordability were estimated for Embu, Kisumu and Kajiado counties for a five-person modelled household comprising a breastfed child (12–23 months), a school-aged child (6–7 years), an adolescent girl (14–15 years), a breastfeeding woman and an adult man.

The analysis was additionally extended to three individuals who fall under the UCB beneficiary criteria: a child of 6–8 months, a child of 9–11 months, and a child of 2–3 years. Price data that were used to calculate costs are retail prices collected by WFP in July 2022. Data used to calculate non-affordability were taken from a primary household expenditure survey that was carried out simultaneously with the retail price survey. Analysis was carried out between July and August 2022. In August and September 2022, the NSPS led the FNG process and convened stakeholders to inform, validate and draw conclusions from the FNG analysis.

## Main findings

Nutrient-adequate and healthy diets cost two to three times more than diets that meet only energy needs. Averaged across the three counties, the costs of the energy-only, nutrient-adequate and healthy diets are estimated to be KES 222, KES 440 and KES 574 per day respectively. Non-affordability of the energy-only, nutrient-adequate, and healthy diets is estimated to be 7 percent, 43 percent and 60 percent respectively.

This means that while almost all households in UCB pilot counties would be able to afford a diet that meets energy needs, approximately two in five would not be able to afford the lowest cost nutrient-adequate diet.

Based on the costs of the nutrient-adequate diet, the analysis assessed whether the UCB transfer would be adequate to cover nutrient needs of the targeted child and their household. Assuming that roughly half of the transfer would be used for food purchases depending on the location, the UCB cash transfer covers one to two thirds of the cost of a nutrient-adequate diet for a child aged under 3 years. The transfer covers 3 to 4 percent of the household's nutrient-adequate diet cost.

The analysis also showed how households choose to spend the UCB matters: the impact of the UCB transfer on dietary quality of the young child can be maximised if a household uses the cash to purchase diverse nutritious foods. Social behaviour change (SBC) strategies can help to ensure that households choose nutritious foods from diverse food groups.

The analysis considered plus, or complementary, services targeted at individuals with specific nutritional vulnerabilities, that could be delivered alongside the cash transfer to make it more comprehensive. The analysis found that the UCB provides a good platform for promoting good infant and young child feeding (IYCF) practices among beneficiaries because suboptimal breastfeeding and poor dietary intake among children increase their risk of malnutrition. Other individuals in the household could also benefit from plus services and be potentially reached through UCB registries, such as adolescent girls and pregnant and breastfeeding women who are particularly nutritionally vulnerable. Nutrition-specific interventions such as micronutrient supplementation that provide essential micronutrients to support good nutrition can leverage UCB beneficiary databases to improve service delivery.

The analysis considered food system transformations that could support the UCB to improve household access to nutritious foods. One pathway is through large scale fortification of commonly consumed staple foods.

Subsidising fortified cereal for UCB beneficiaries can improve micronutrient intake. Household production of nutritious foods is another pathway. The UCB can provide a platform to deliver agricultural support to beneficiary households to start kitchen gardens and homestead production of animal source foods, because nutrition-sensitive agriculture can support dietary diversity and strengthen local food systems.

Through combining interventions, the analysis found that adding multisectoral plus services to the UCB transfer can contribute towards closing a household's affordability gap. However, the effectiveness of plus services depends heavily on context because food systems across Kenya are diverse and location specific. UCB plus interventions should be selected based on local realities and opportunities within local food systems.

## Recommendations

The FNG stakeholder engagement process led to the development of recommendations on how to leverage the UCB as a platform for plus interventions for improving nutrition. Stakeholders prioritized the following actions:

- **Strengthen food systems to support beneficiary household access to nutritious foods**, by assisting UCB households with inputs for kitchen gardens, by providing UCB households with access to fortified maize and biofortified foods, and by promoting home production of animal source foods.
- **Support micronutrient intake of the most nutritionally vulnerable through nutrition-specific interventions** by providing vulnerable UCB households with access to micronutrient powder and/or iron and folic acid (IFA) for pregnant and lactating women and adolescent girls.
- **Establish mechanisms to promote the selection of nutritious foods** by providing UCB households with fresh-food voucher top-ups and by developing SBC strategies that strengthen nutrition knowledge.





## Fill The Nutrient Gap Kenya | SUMMARY

# Introduction to Fill the Nutrient Gap (FNG) for the Kenya Universal Child Benefit (UCB)

Under the Social Protection Policy (2012), the Government of Kenya has outlined a progressive vision for a comprehensive national social protection system that supports individuals across the life cycle and across specific vulnerabilities. In 2018, the government implemented a universal old age pension. Since 2019, the Kenyan State Department of Social Protection, Senior Citizens Affairs and Special Programmes of the Ministry of Public Service, Gender, Senior Citizens Affairs and Special Programmes has initiated efforts to establish a universal social protection programme for young children. In 2021-2022, the National Social Protection Secretariat (NSPS) rolled out a pilot for the Universal Child Benefit (UCB), a cash transfer programme which would guarantee a minimum transfer amount to households with young children. Under the leadership of NSPS, the WFP joined other

national and county-level partners<sup>1</sup> to develop a strategy to advocate for the codification and expansion of the UCB nationally. The Fill the Nutrient Gap (FNG) analysis is one evidence-generation piece in a larger effort to support this strategy. The FNG corresponds to direct objectives of the UCB pilot<sup>2</sup> because it aims to generate lessons for the introduction of a long-term UCB, including the potential impacts of the cash transfer and complementary services on children's nutrition, and to strengthen advocacy efforts and visibility for the UCB.

The FNG analysis of the Kenya UCB focuses specifically on its adequacy and comprehensiveness. The adequacy is analysed by comparing the costs of nutrient-adequate diets to the value of the transfer, while the comprehensiveness is analysed through modelling of

<sup>1</sup> See extended report for full list of participants in the FNG process for the Kenya UCB.

<sup>2</sup> In addition to the two objectives specified, the UCB Pilot Manual states that the first objective of the UCB pilot was to cushion children and their families from the lasting socio-economic impacts of the COVID-19 crisis.

plus interventions which could make the UCB more nutrition-sensitive. The analysis is based on the UCB pilot carried out between November 2021 and 2022, in which beneficiary households in the three pilot counties of Embu, Kisumu and Kajiado received KES 800 per month for each child under 36 months. The FNG calculates the cost of accessing nutritious diets in these areas and can therefore assess the contribution that the UCB and other plus services could make to covering these costs.

The analysis conducted under the FNG is not intended to stand alone; it aims to complement the ongoing advocacy efforts of district, county and national stakeholders. The additional value of the FNG is to provide tangible figures on the costs of nutritious and healthy diets for households and for the individuals within them, and to provide a yardstick against which to compare the contribution of UCB towards nutrition. The analysis draws conclusions on the potential impacts of different plus interventions and, through the FNG stakeholder engagement process, arrives at recommendations of which plus services to include, and which actions to take to support their implementation.

## Building consensus for improved nutrition

Nutrition is a crucial pillar in the development of a healthy, productive nation. Good nutrition enhances physical and cognitive development, prevents disease and increases the potential of the workforce and

society. Improving diets, especially of children and women, brings immediate and long-term health, education and economic benefits. The two Lancet series (2013 and 2021) on maternal and child undernutrition identified a variety of nutrition interventions that have proven effective. Improving the nutrition situation in a country requires coordinated actions across the food, social protection, health and education systems, that are grounded in a good understanding of the local context, its opportunities and bottlenecks, and a synthesis of global and local evidence.

Fill the Nutrient Gap (FNG) is an analytical process comprised of a secondary literature review in combination with Cost of the Diet (CoTD) linear optimization to understand local drivers that affect the availability, cost and affordability of a nutritious diet. Using the CoTD software, solutions of interest for improving availability of nutritious foods, lowering their cost and/or increasing income, are then assessed for their potential to improve affordability. In this way, the context-specific potential of proven interventions can be quantified.

This summary report presents findings from the analysis and a discussion of its process, methodology and limitations. It highlights recommendations and priorities identified by stakeholders. By identifying and contextualizing new findings, the FNG analysis contributes towards building consensus around a vision and a path forward for improved nutrition in Kenya in a sustainable way that is integrated across the country's food systems.



## FILL THE NUTRIENT GAP: SITUATION ASSESSMENT FOR MULTISECTORAL DECISION-MAKING ON THE PREVENTION OF MALNUTRITION

Malnutrition has two direct causes: inadequate dietary intake and disease. The FNG assessment focuses on gaps in dietary intake to inform national policies and actions that can be taken across food, social protection, and health systems to improve nutrition, with a focus on the most vulnerable populations. The FNG considers whether nutritious foods are available, accessible, and affordable in a specific context, and identifies the barriers that lead to gaps in nutrient intake. The analysis focuses on the extent to which vulnerable people have choices in the foods they consume and how those choices are made. The FNG process identifies and models the impacts of context-appropriate interventions to improve diets and nutrient intake across food, health, education, and social protection systems. The results are used to identify entry points across systems, to refine programmes, and to make recommendations to policymakers.

The assessment comprises two components:

1. A country-specific review of secondary data and information on factors that reflect or affect dietary intake. This includes malnutrition trends over time, characteristics of the food system and food environment, and population behaviour related to food and feeding.
2. An assessment of the extent to which economic barriers prevent adequate nutrient intake. This uses the Cost of the Diet (CotD) linear programming software developed by Save the Children (UK), and includes modelling of the economic impact of possible interventions to increase nutrient intake and fill nutrient gaps.

Preventing malnutrition, including through improved access to nutritious foods, cannot be achieved by one sector alone. FNG is designed to inform multisectoral decision making and therefore engages stakeholders from all sectors including food, health, agriculture, education, and social protection.

It is the stakeholders who define the scope and focus of the assessment. They contribute data and sources of information for identification of context-specific barriers and entry points and together with the analytical team develop a shared understanding of the issues and possible solutions. They then identify appropriate nutrition-specific and nutrition-sensitive interventions that can be implemented by different sectors using their existing delivery platforms. These could be social safety nets, food processing and markets, antenatal care, school feeding programmes, etc.

The FNG methodology has been developed by WFP with technical support from partners including the University of California Davis, the International Food Policy Research Institute (IFPRI, Washington DC), Epicentre (Paris), Harvard University (Boston), Mahidol University (Bangkok), Save the Children (UK), and UNICEF.

Between 2016 and early 2022, FNG analyses were in process of completed in over 40 countries.

For more information on the concept and the method of the analysis, see Bose I, Baldi G, Kiess L, de Pee S, The 'Fill the Nutrient Gap' Analysis: An approach to strengthen nutrition situation analysis and decision-making toward multisectoral policies and systems change. *Matern Child Nutr* 2019; DOI: 10.1111/mcn.12793



# Process and Scope of the Analysis

## Process of the FNG UCB analysis in Kenya

**Figure 1:** The Fill the Nutrient Gap (FNG) process followed in Kenya (2022)



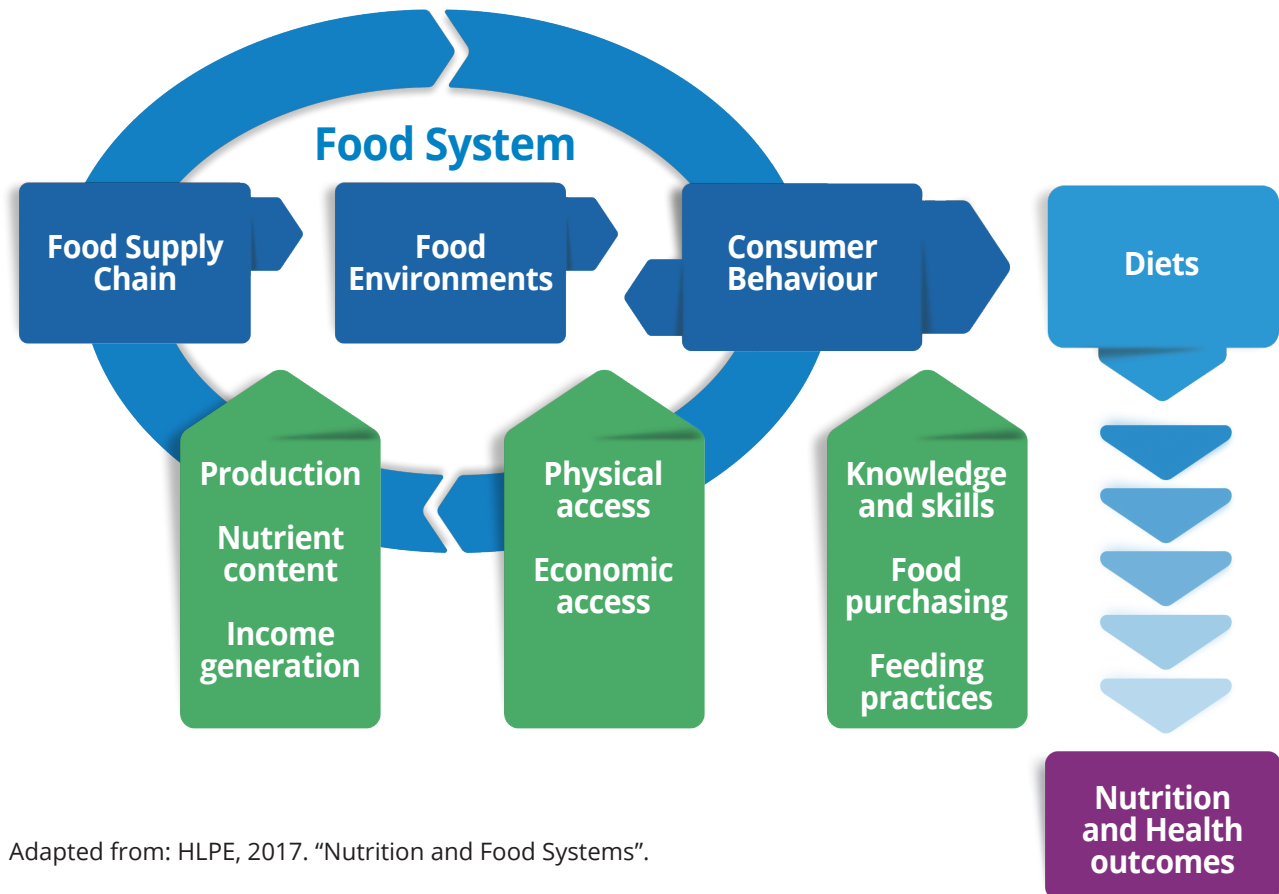


## Scope and Focus of the FNG Analysis

Long-term solutions to malnutrition require transformation of the food system along food supply chains, in food environments and in consumer behaviour patterns (Figure 2). The Kenya UCB

FNG focused primarily on the intersection of food environments and consumer behaviour because cash transfers are spent by consumers within their context-based food environments. However, other aspects of the food system were also included in the analysis, such as food fortification which links to local and national food supply chains.

**Figure 2:** Food systems for diets and nutrition and health outcomes framework



Adapted from: HLPE, 2017. "Nutrition and Food Systems".



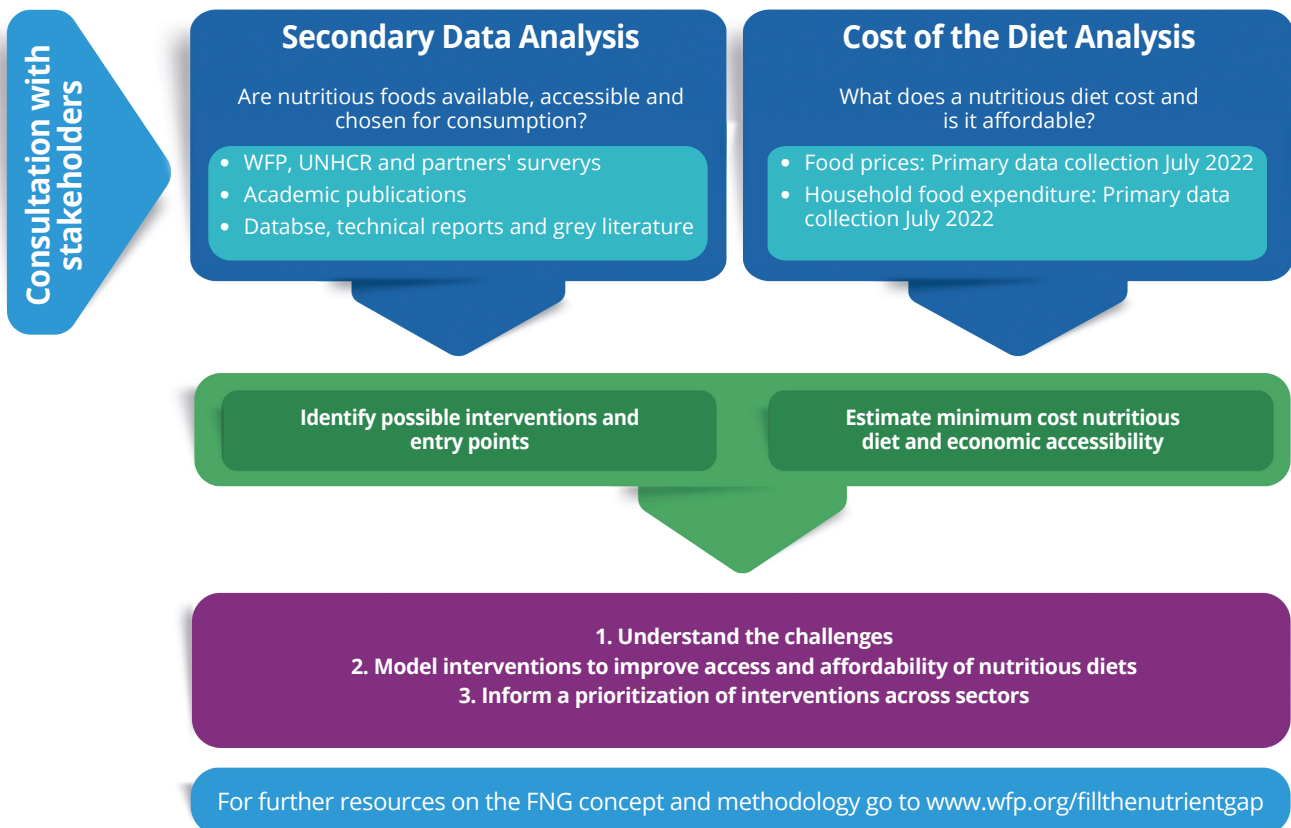
## Methodology

The FNG analysis is composed of a secondary literature review of the food system and the social protection and health sectors, focusing on entry points for current and potential nutrition interventions, and a CotD analysis which uses linear optimization to provide a detailed view of availability, cost and affordability of nutritious diets (Figure 3).

## Secondary Data Analysis

FNG secondary data analysis identifies barriers to accessing healthy diets, platforms for reaching nutritionally vulnerable groups in the population, and opportunities for policy and programme interventions to improve access to nutritious foods through multiple sectors, including agriculture, health, social protection and education.

**Figure 3:** FNG analytical framework



## Cost of the Diet (CotD)

### COST OF THE DIET (CotD) ANALYSIS

CotD software uses linear programming to understand the extent to which poverty, food availability and food prices may affect the ability of people to meet their nutrient needs. Using price data collected from markets or from secondary sources, the software calculates the amount, combination, and lowest possible cost of local foods that are required to provide individuals or households with their average needs for energy, and their recommended intake of protein, fat and micronutrients<sup>1</sup>. These diets are calculated within defined constraints to prevent the inclusion of unrealistic types or amounts of food and the provision of excessive amounts of nutrients.

The FNG approach defines the 'Staple Adjusted Nutritious Diet' as the lowest cost nutritious diet that includes a typical staple food and excludes foods that are prohibited<sup>2</sup>. This diet is referred to as the 'nutritious diet' throughout this summary. It meets requirements for nutrients, including protein, nine vitamins and four minerals, and does not exceed energy and fat requirements. The nutritious diet is conceptually similar to the 'nutrient-adequate' diet estimated as the second level of diet quality in the 2020 and 2021 State of Food Insecurity (SOFI) reports.

Population food expenditure data is compared to the cost of the nutritious diet and is used to estimate the proportion of the population that would not be able to afford it. This non-affordability can be estimated and compared across different regions, seasons or countries. The estimate of non-affordability is a conservative estimate of the proportion of households unable to afford the lowest cost nutritious diet, assuming optimized selection of nutritious foods. The real cost and non-affordability of a nutritious diet is likely to be higher, as reflected by a healthy diet which includes foods from several food groups and has greater diversity within food groups.

<sup>1</sup> As defined by the Food and Agricultural Organization (FAO) and the World Health Organization (WHO).

<sup>2</sup> This diet is not intended to reflect what individuals or households are currently eating nor should it be used to develop food-based recommendations or dietary guidelines. Some foods are prohibited for customary or health reasons, e.g., raw meat during pregnancy in some parts of the world.

## Types of diets calculated by the FNG analysis

The Kenya UCB FNG calculated the lowest costs of the three types of diets:

- Energy-only diet: an optimized diet that meets an individual's or a household's energy requirements; calculated using the CotD software.
- Nutrient-adequate diet: an optimized diet that, in addition to energy requirements, meets an individual's or household's macro- and micronutrient requirements; calculated using the CotD software.

- Healthy diet: a diet that meets harmonized food-based dietary guidelines; calculated using Excel and Stata based on guidelines provided by the Food Prices for Nutrition team (1).

While the energy-only diet is useful for monitoring the cost of accessing food covering basic energy needs, it should not be used for monitoring or nutrition security. The costs of the nutrient-adequate and healthy diets are useful benchmarks for assessing access to locally available nutritious foods, but differ in their calculation methodologies and how the indicators can be used. Details on the differences between the costs of these two diets are presented in Table 1.



**Table 1:** Comparison of the healthy diet and nutrient-adequate diet

| Feature  | Cost of a nutrient-adequate diet   | Cost of a healthy diet  |
|--|--|---|
| <b>Objective of the metric</b>   | Estimating a minimum cost threshold to avoid deficiencies of essential nutrients. This metric can be used to estimate the proportion of households unable to access nutrient-adequate diets. Inform multisectoral policies/ programmes by modelling the impact of different interventions on the cost of a nutrient-adequate diet. | Calculating and monitoring the cost of meeting food-based dietary guidelines (FBDGs). This can also be used to estimate the proportion of households unable to access a healthy diet.                         |
| <b>Approach</b>  | Nutrient-based approach. Calculates the least-cost diet that meets energy and macronutrient requirements as well as selected micronutrient requirements for individuals across the life cycle.   | Food group-based approach. Calculates the least-cost diet that meets dietary guidelines defined for a reference individual.   |
| <b>Reference individual</b>  | An FNG standard modelled household of 5 people: <ul style="list-style-type: none"> <li>• Breastfed child (12-23 months)</li> <li>• Child (either sex) (6-7 years)</li> <li>• Adolescent girl (14-15 years)</li> <li>• Adult man (30-59 years)</li> <li>• Breastfeeding woman.</li> </ul>   | Typically uses a single reference individual, usually the non-pregnant, non-lactating woman (30 years). For purposes of FNG, results have been scaled to be comparable to the modelled 5-person household.    |
| <b>Geographical unit</b>   |  | County level.   |
| <b>Does it represent the cost of a recommended diet?</b>               | No. This is an economic benchmark of the lowest cost for people to meet their nutritional needs with foods available in local markets. This is not a shopping list or recipe.  | Yes, as FBDGs focus on foods rather than nutrients. This is an economic measure of the lowest cost of selecting foods that would allow people to meet recommended dietary guidelines given local food prices. |
| <b>Does the selected diet reflect actual diets and/or preferences?</b> | The diet is not based on dietary guidelines, tastes or local preferences. The modelled diet is, however, adjusted to include at least 2 portions of the most widely consumed staples in each assessment area and selects foods that are available in the area (from the list of food prices).                                      | While dietary guidelines may be based on cultural preferences, the cost of a healthy diet selects the cheapest items within each food group and is agnostic to tastes and preferences.                        |

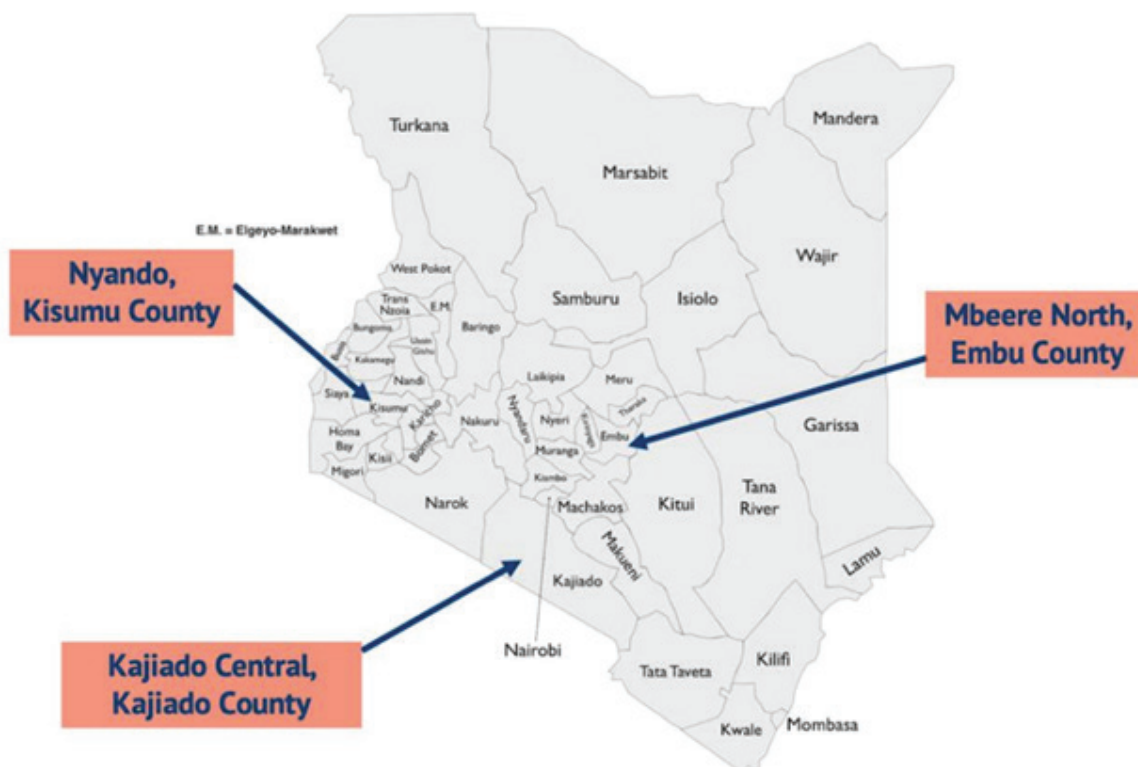
## Data sources for diet cost analysis

The FNG analysis was carried out in the UCB pilot counties of Embu, Kisumu and Kajiado shown in Figure 4. WFP collected data on retail food prices for the purposes of the analysis in selected markets within each county:

- **Mbeere North, Embu County:** Riandu, Nthawa, Gitiburi and Thura
- **Nyando, Kisumu County:** Kachogo and Kakola
- **Kajiado Central, Kajiado County:** Kajiado Township and Ildamat

Primary data collection on household food expenditure was also carried out in the pilot counties and was restricted to UCB beneficiary households.

**Figure 4:** Geographic selection for UCB pilot and FNG analysis



## Modelled household & main target groups for the analysis

Cost of the Diet analysis was executed for two modelling groups. The first, a five-person household, is comprised of a breastfed child (12–23 months), a school-aged child (6–7 years), an adolescent girl (14–15 years), a breastfeeding woman and an adult man. The household cost estimates were used in the calculation of non-affordability.

The second group includes individuals eligible for the UCB transfer, children younger than 36 months. Cost of the Diet analysis was extended to three individuals: a child of 6–8 months, a child of 9–11 months, and a child of 2–3 years. These individuals, and the child aged 12–23 months, comprise what is referred to as the 'beneficiary modelling group.'

## Intervention modelling

The primary objective of the FNG in Kenya was to assess the adequacy of the UCB cash transfer with respect to the costs of nutritious diets for children under 36 months, and to build an evidence base for plus interventions that could be included alongside the UCB to improve the nutritional adequacy of the transfer.

Modelling on the adequacy of the cash transfer at the individual and household levels was included in the baseline findings. The pilot value of the UCB cash transfer is KES 800 per month. To factor in the reality that households receiving a cash transfer will not use all of it on food, household purchasing patterns were considered, in particular the share of food and non-food expenditure. The total amount of the cash transfer going towards food purchases and used in the adequacy modelling is based on the average proportion of total expenditure going towards food purchases, as calculated by the Kenya Integrated Household Survey 2016/2017 (2) and shown in Table 2.

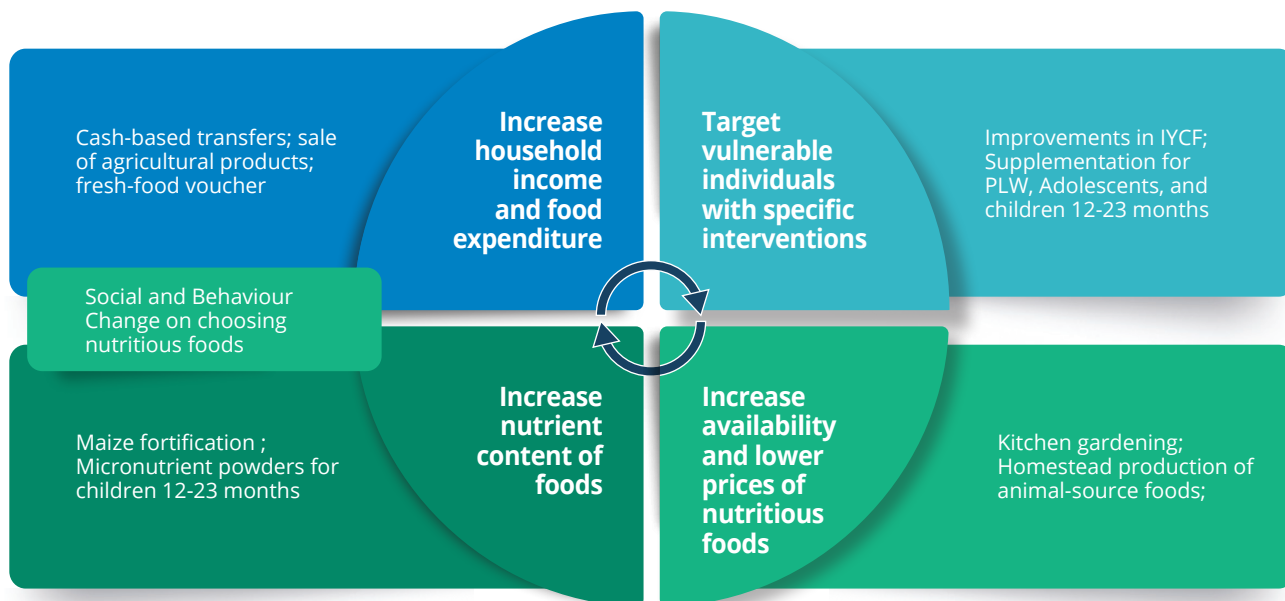
**Table 2:** Percentage of UCB cash transfer assumed to go to towards food purchases by county

|                | Monthly UCB cash transfer in KES | Percentage going towards food purchases | Estimated monthly increase in food expenditure (KES) |
|----------------|----------------------------------|---|--|
| <b>Embu</b>    | 800                              | 59 percent                              | 474  |
| <b>Kisumu</b>  | 800                              | 58 percent                              | 462  |
| <b>Kajiado</b> | 800                              | 49 percent                              | 392  |

The focus of modelling the plus interventions was defined during stakeholder consultations in August 2022. These were based on the priorities defined by the NSPS, the WFP Kenya Country office, and engagements

with subnational government actors, NGOs, civil society, and line ministries with the objective of being able to identify concrete recommendations. The selected interventions are outlined in Figure 5.

**Figure 5:** Entry points and interventions modelled to estimate reduction in cost of a nutritious diet



## Scope of intervention modelling

**Geographic scope:** The majority of modelling was carried out in all three of the UCB pilot counties of Embu, Kisumu and Kajiado. Agricultural modelling was restricted to areas with feasibility of production and is denoted in descriptions of these specific models.

**Seasonal scope:** Data collection was carried out in July, which is considered the harvest season in the three pilot counties. As data was collected within one week, seasonal dimensions of changes in diet costs and modelling were not considered in the analysis.

## Considerations for interpretation and data gaps

**Food price data:** Food price data collection was in markets described in the previous section on data sources. Although food price data collection was exhaustive, i.e., enumerators were instructed to capture all food items available in the market place, the collection was not done in all markets within each county.

**Expenditure data:** As noted in the section on data sources, data collection was carried out in specific areas of each county and then aggregated at the county level. Differences between livelihoods exist within counties themselves, meaning that the districts selected may not be wholly representative of larger livelihoods existing at the county level.



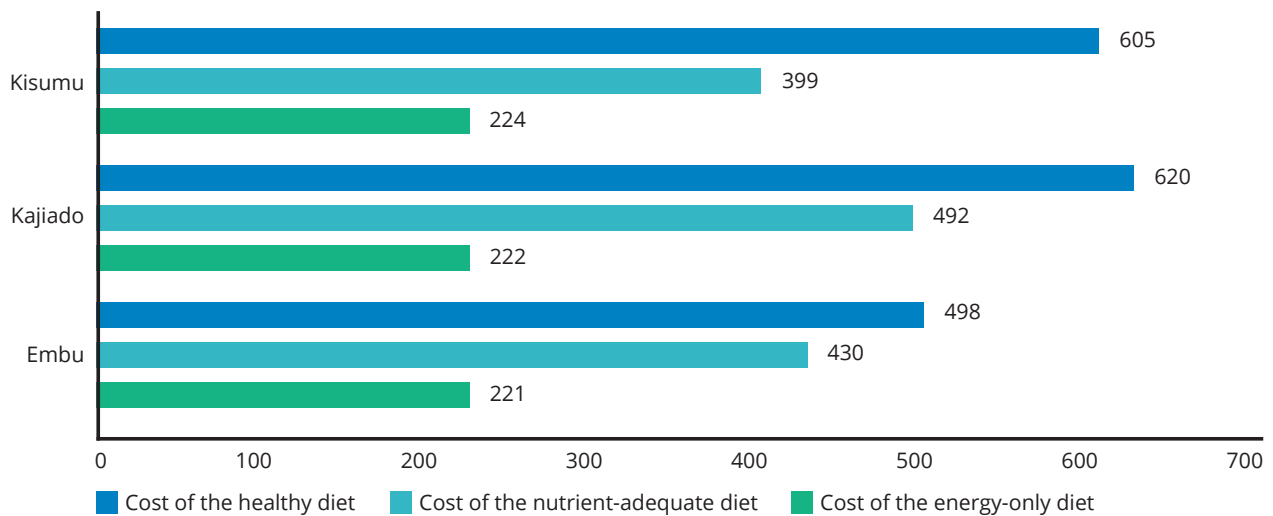
# Findings

## 1. Nutrient-adequate and healthy diets cost two to three times more than diets that meet only energy needs.

Across the three countries the average daily cost per five-person household of the three diets is as follows: the energy-only diet is KES 222 (USD 1.86),

the nutrient-adequate diet is KES 440 (USD 3.70), and the healthy diet is KES 574 (USD 4.78). Costs of each diet for each county are presented in Figure 6. The big difference between the energy-only diet and the other two is due to the foods included in each diet. The energy-only diet is comprised of inexpensive staples such as maize, while the others are comprised of a diversity of food groups and include cereals, animal source foods, fresh fruit and vegetables.

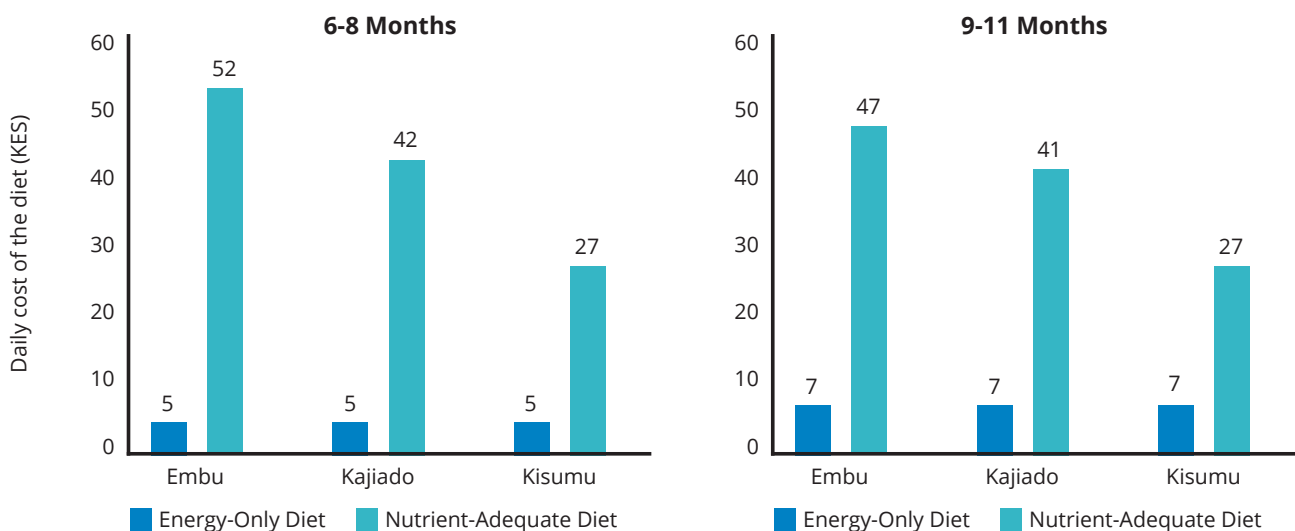
**Figure 6:** Cost of the energy-only, nutrient-adequate, and healthy diet across three the UCB pilot counties per day for 5-person household

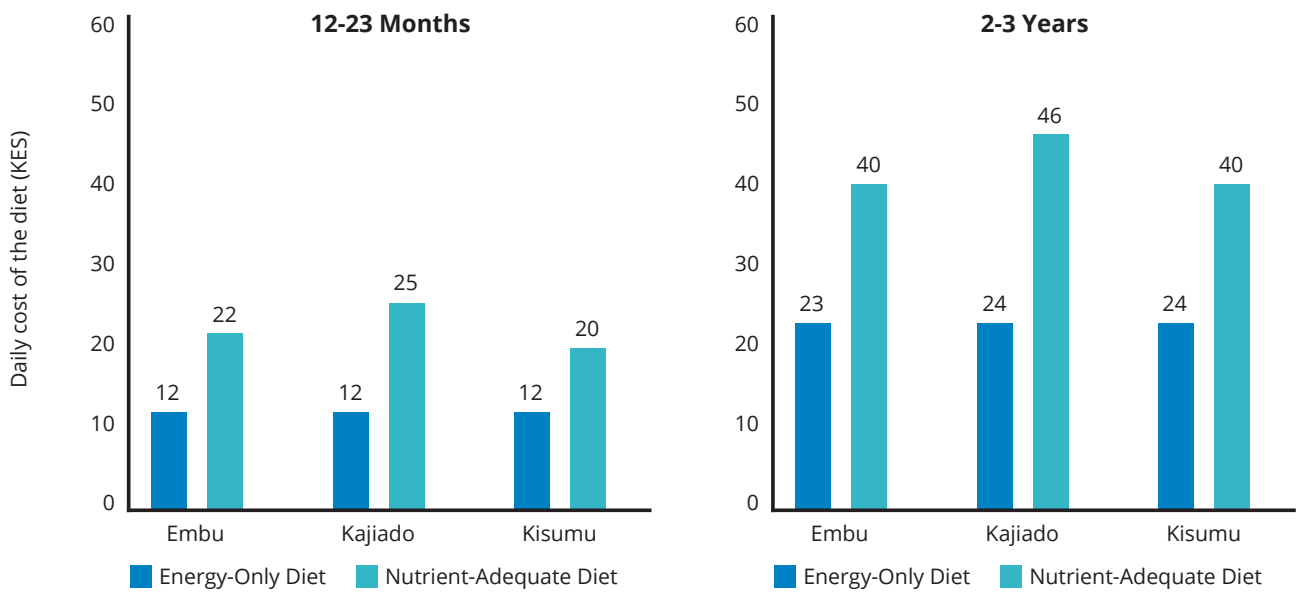


Costs of the energy-only and nutrient-adequate diets were calculated separately for each individual in the beneficiary modelling group and are presented in Figure 7. The cost of the energy-only diet increases with the age of the household member, while the cost of the nutrient-adequate diet is highest for the youngest child of 6-8 months old. This because the

child has the lowest kilocalorie requirements and receives the biggest quantity of breastmilk. As a result, the foods required to fill remaining energy and nutrient gaps left after breastfeeding must be more nutrient-dense (i.e., have a higher nutrient content relative to calorie context) for this age group compared to older children.

**Figure 7:** Daily cost of the energy-only diet and nutrient-adequate diet for individuals of the beneficiary modelling group



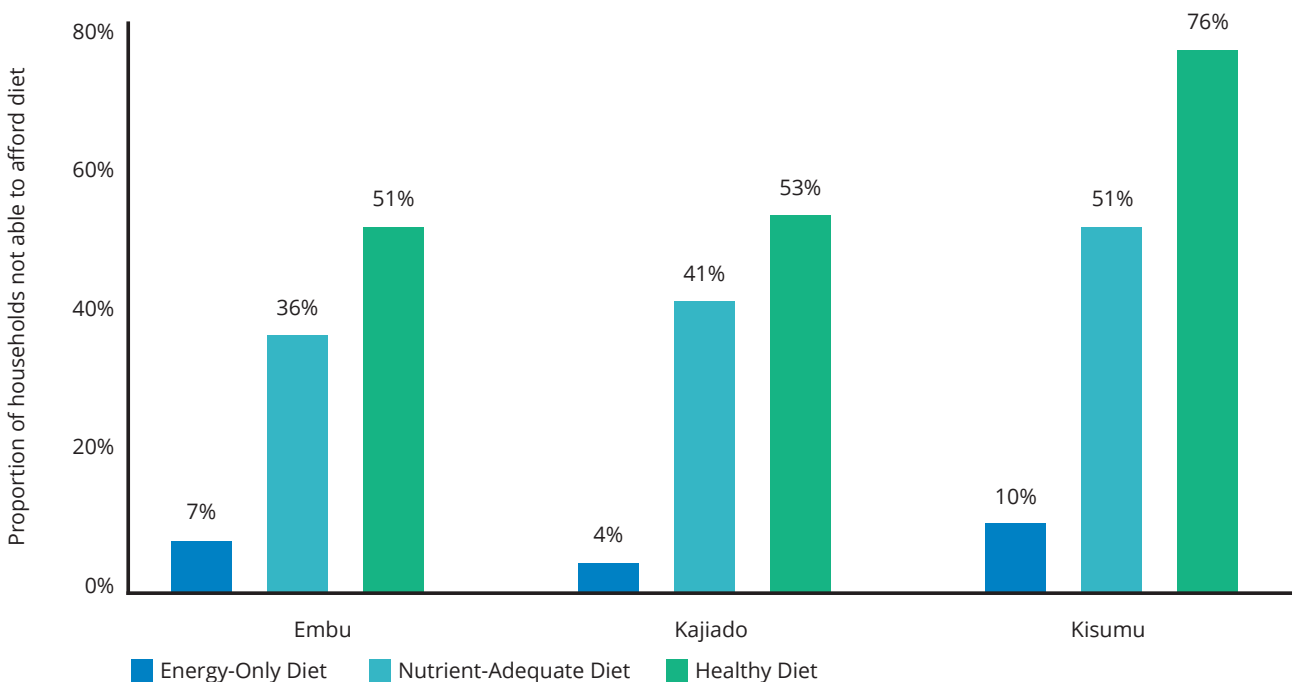


Note: Cost of the healthy diet was not calculated for the beneficiary modelling group.

**2.** While almost all households in UCB pilot counties would be able to afford a diet that meets energy needs, approximately two in five would not be able to afford the lowest cost nutrient-adequate diet.

Non-affordability is defined as the percentage of households that would be unable to afford a diet given their current food expenditure. The FNG estimates that as averages among the three counties, at least 7 percent, 43 percent, and 60 percent of households would be unable to afford the energy-only, nutrient-adequate and healthy diets respectively. The levels of non-affordability at the county level are presented in Figure 8.

**Figure 8:** Non-affordability of the energy-only, nutrient-adequate, and healthy diet at the household level



Non-affordability is determined by the cost of a diet as well as the level of household food expenditure or income within each county. For example, while Kisumu had the lowest cost of the nutritious diet,

non-affordability was the highest there because households in Kisumu generally spend less on food than households in the other two counties.

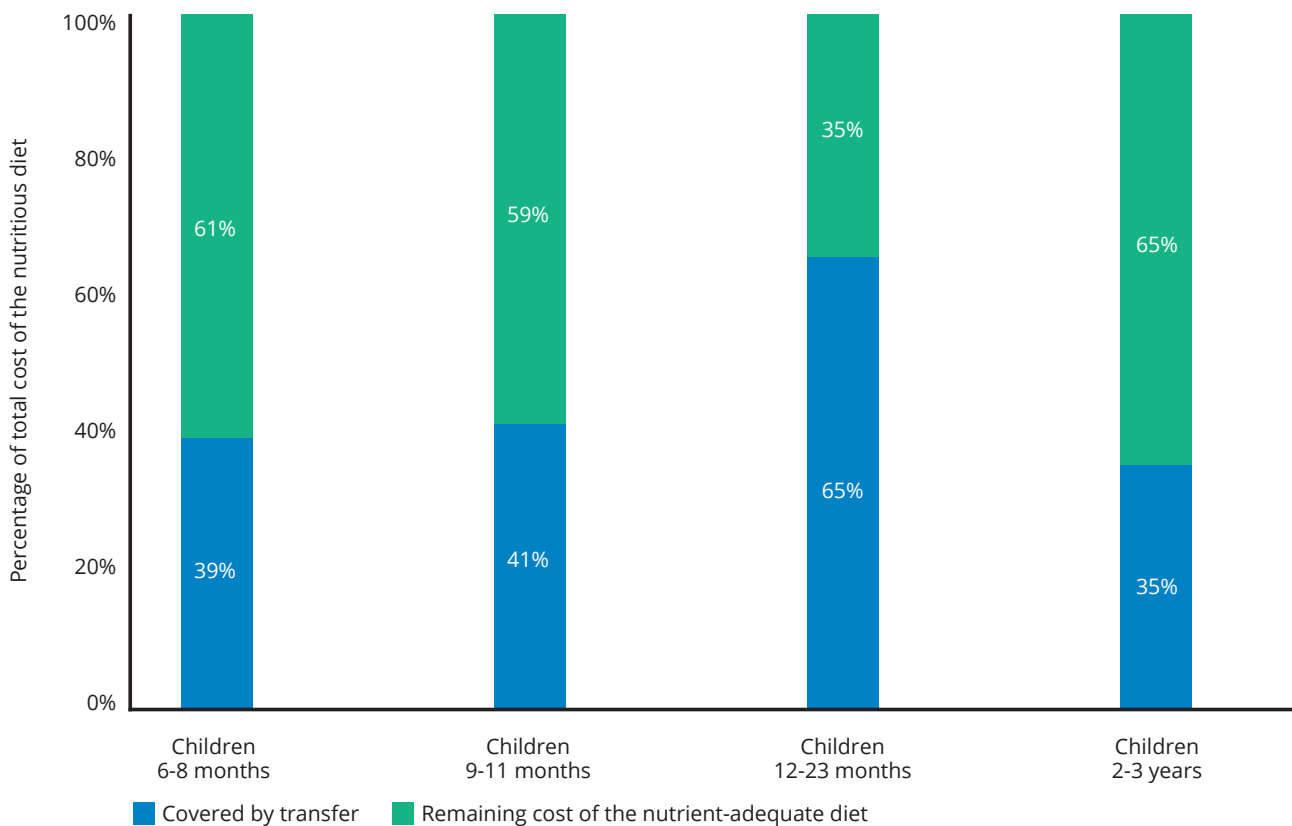


### 3. The UCB cash transfer covers one to two thirds of the cost of a nutrient-adequate diet for a child aged under 3 years. The transfer covers 3 to 4 percent of the household's nutrient-adequate diet cost.

The UCB cash transfer was piloted at KES 800 per month per child under 36 months. The FNG assessed the adequacy of the UCB's contribution towards the monthly cost of the nutritious diet for the beneficiary modelling group. To reflect household purchasing

patterns, the analysis assumed that households in Embu, Kisumu and Kajiado spent 59 percent, 58 percent and 49 percent respectively of the cash transfer on foods specifically for the beneficiary child (see section on intervention modelling on page 13 for further details). Figure 9 presents the percentage of the cost of the nutritious diet covered by the cash transfer, showing that the UCB will cover between one third to two thirds of the monthly cost of the nutritious diet among individuals in the beneficiary modelling group.

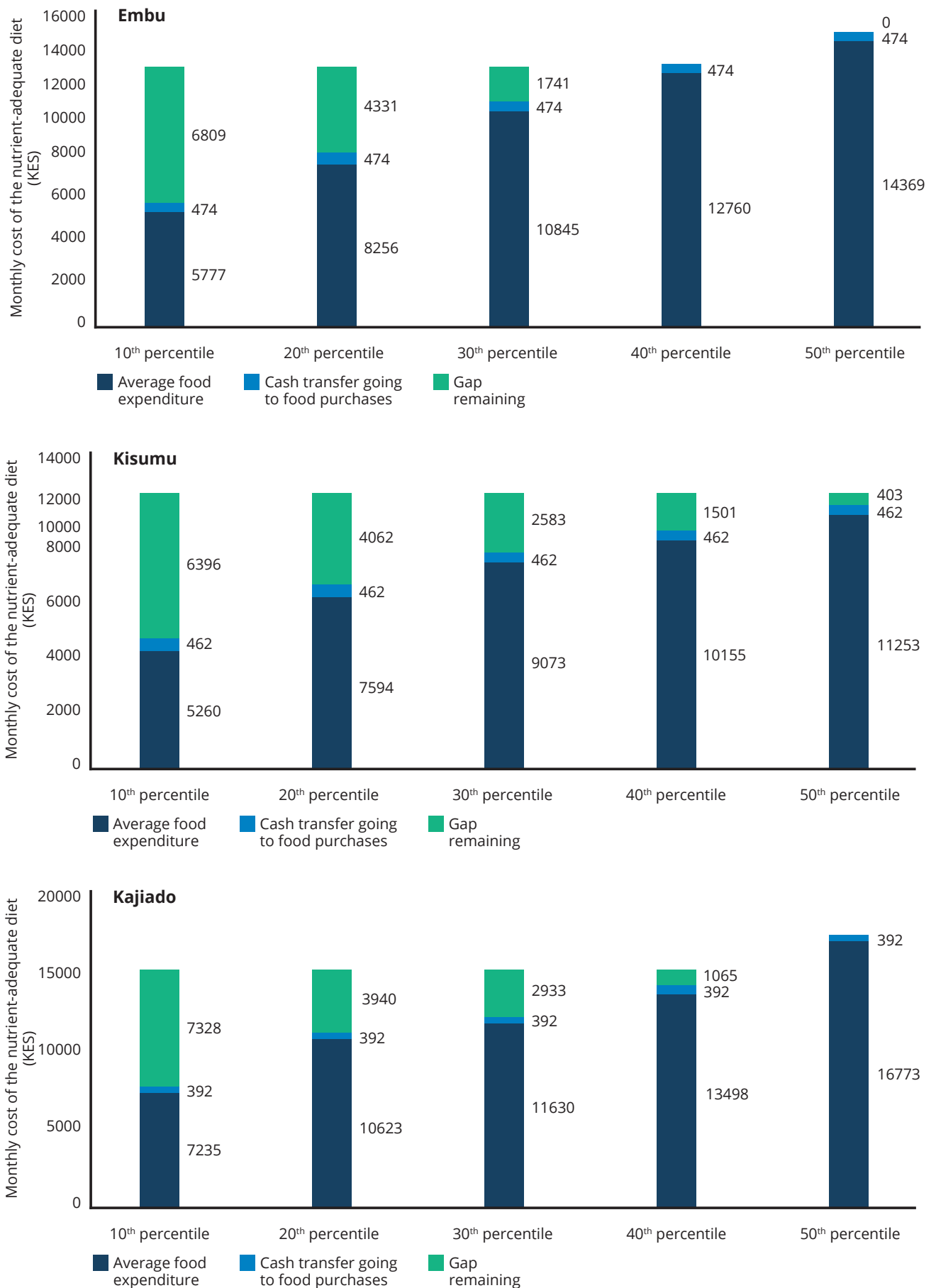
**Figure 9:** Adequacy of the UCB transfer in covering the cost of the nutrient-adequate diet for individuals of the beneficiary modelling group



The FNG also considered a scenario in which the UCB cash transfer was not utilized specifically for the target beneficiary, but was integrated into the larger household food budget. The analysis modelled the adequacy of the cash transfer on the modelled five-person household, which included one individual within the UCB beneficiary criteria (the child 12-23 months). The analysis included the same assumptions regarding the proportion of the cash transfer going to food purchases in each county as presented in the previous scenario. Figure 10 shows the contribution of the cash transfer towards reducing the affordability gap across the lowest expenditure deciles for each of the UCB pilot counties. Each bar in the figure represents

the monthly cost of the nutrient-adequate diet; values in green represent average food expenditure per food expenditure decile, values in blue represent the amount of the cash transfer going towards food purchases, and values in grey represent the affordability gap, i.e. the remaining cost of the nutrient-adequate diet not covered by expenditure or the cash transfer. All three graphs show that it is not only the poorest households which benefit from the cash transfer. In Embu, households up to the 40<sup>th</sup> percentile of food expenditure continue to face an affordability gap, while in Kisumu households beyond the 50<sup>th</sup> percentile face the gap, and in Kajiado households up to the 50<sup>th</sup> percentile face gap.

**Figure 10:** Contribution of cash transfer to covering affordability gap across expenditure deciles for each of the three pilot counties



## 4.

The impact of the UCB transfer on dietary quality of the young child can be maximised if a household uses the cash to purchase diverse nutritious foods. Social behaviour change (SBC) is needed to ensure that households choose to purchase nutritious foods from diverse food groups.

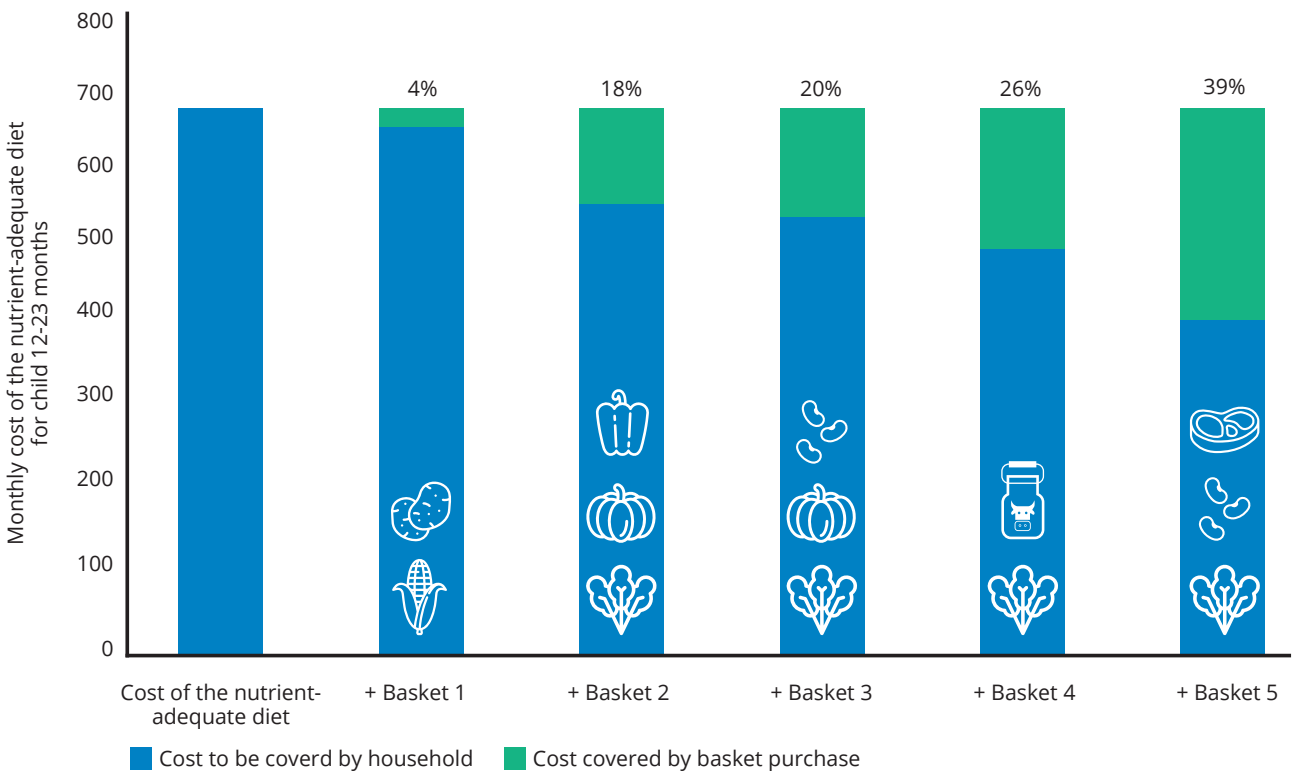
To showcase the importance of SBC communication as a complement to the cash transfer, the analysis modelled baskets of varying micronutrient content which could be purchased using the UCB cash transfer. The model assumed that the household would spend the cash transfer (adjusted for the proportion of cash going towards food purchases, as described in the previous section) only on the targeted beneficiary, a child aged 12-23 months. Based on retail food prices in each county, different quantities of food that could be purchased

using the cash were determined. The quantity of each food item included in the basket, given in terms of range across the three countries, were as follows:

- Basket 1: Potatoes (600-850g); maize (625-975g).
- Basket 2: Mango (475-1050g); pumpkin (275-750g); kale (625-1275g).
- Basket 3: Beans (475-1050g); pumpkin (275-750g); kale (500-700g).
- Basket 4: Milk (625-1350g); kale (500-1250g).
- Basket 5: Fish or goat (75-125g); beans (500-700g); kale (500-700g).

On average between the three counties, basket 5 had the greatest impact on covering the cost of the nutritious diet for a child aged 12-23 months, because it included a wider range of micronutrients. Basket 1, comprised only of starchy staples, provided the least coverage of the cost of the nutrient-adequate diet, as it did not meet the wider range of micronutrient needs covered by the other baskets. The coverage provided by each basket is shown in Figure 11.

**Figure 11:** Monthly cost of the nutrient-adequate diet covered by basket purchased with UCB cash; modeled for a child aged 12-23 months



The FNG analysis also modelled the impact of a restricted food voucher valued at KES 600, provided as a top-up to the cash transfer, through which only selected nutritious foods would be available for purchase. The assumption was that the household would spend it on the maximum amount of kale, milk

and eggs enabled by its value and at local food prices. At the household level, the fresh food voucher could cover between 3 to 4 percent of the monthly total cost of the nutrient-adequate diet in addition to the 4 percent covered by the cash transfer.

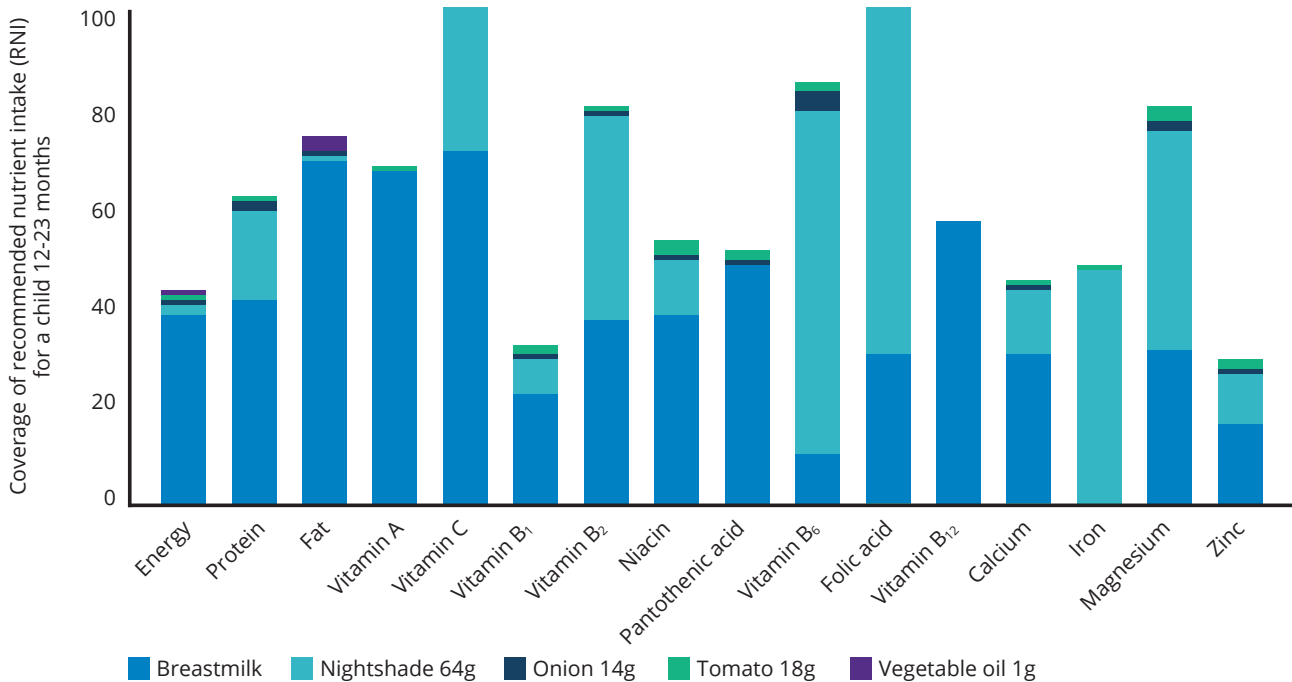
## 5. Suboptimal breastfeeding and dietary intake among children increases their risk of malnutrition. The UCB platform can be used to promote good IYCF practices among beneficiaries.

Stakeholders identified SBC to promote practices to improve maternal, infant and young child nutrition (MIYCN) as a potential plus intervention for the UCB cash transfer. The FNG modelled the cost of the nutritious diet for a child aged 12-23 months under three breastfeeding scenarios: optimal breastfeeding, half of optimal breastfeeding, and no breastfeeding. The analysis found that while the average daily cost of the nutrient-adequate diet is KES 22, this increases to KES 28 in the suboptimal breastfeeding scenario and up to KES 35 in the no breastfeeding scenario,

emphasizing the need to adequately breastfeed children under two years of age.

The analysis also considered how local complementary feeding recipes can improve children’s intakes of key micronutrients. Utilizing recipes from the Kenyan Food Recipes (3) booklet and Migori and Kisumu counties’ booklet Recipes for Complementary Feeding Children 6 to 23 months of Age (4), the analysis found that recipes included in the booklets can provide significant coverage in terms of micronutrient needs, and SBC communication promoting local recipes can positively impact nutrition. The micronutrient coverage of one such recipe, stewed vegetables, is provided in Figure 12. In cost terms, the modelling found that replacing the staple adjustment with one of the complementary recipes increased the cost of the nutrient-adequate diet, indicating that the cash transfer can help to support the adoption of the complementary feeding recipes.

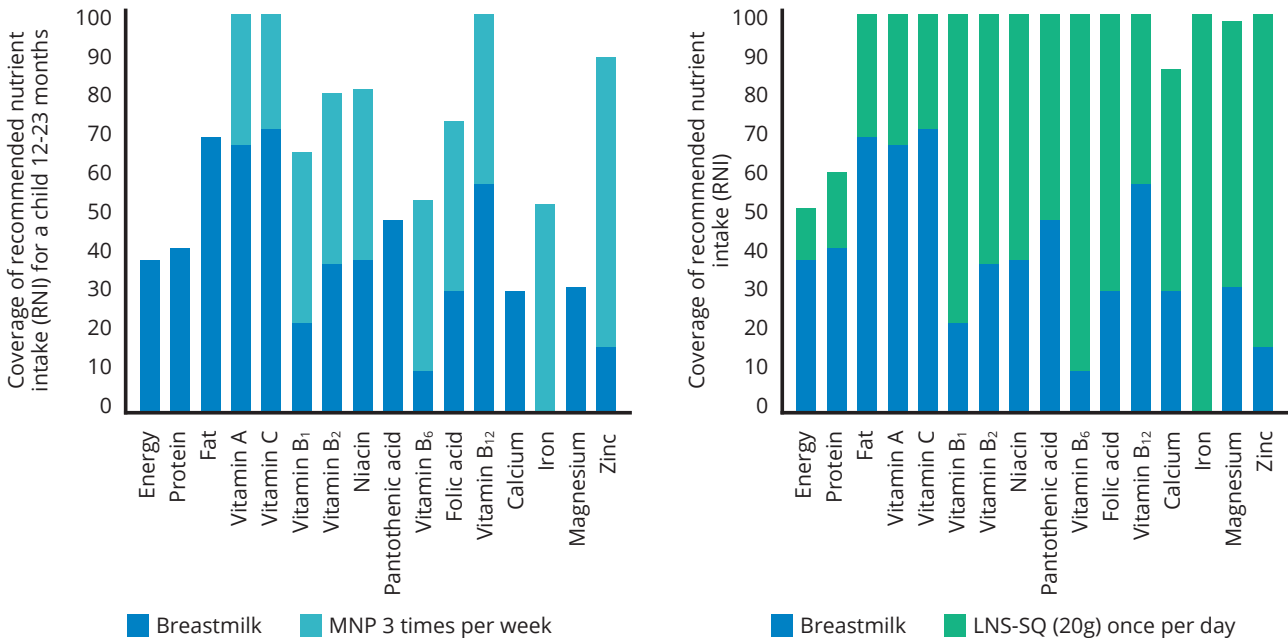
**Figure 12:** Coverage as a percentage of recommended nutrient intake (RNI) for a child 12-23 months provided by local recipe



In addition to local recipes, the FNG considered the potential impact of two types of specialized nutritious foods previously studied in Kenya: micronutrient powder (MNP) and small-quantity lipid-based nutrient supplements (LNS-SQ). The analysis found that in-kind distribution of MNP to children three times per week had a big impact in reducing the cost of the nutritious diet, specifically for children aged 6-8 months (38 percent reduction) and children aged 9-11 months (39 percent reduction). In-kind distribution of LNS-SQ significantly reduced the cost of the nutrient-adequate diet across all age groups: by 65 percent for the 6-8 month old, 71 percent for the 9-11 month old, 52 percent for the 12-23 month old, and 33 percent

for the 2-3 year old. Although LNS-SQ lowered the cost of the nutrient-adequate diet more than the MNP, modelling assumed MNP was given three times per week and LNS-SQ was given daily. The micronutrient coverage for a child of 12-23 months using MNP and LNS-SQ in conjunction with optimal breastfeeding is provided in Figure 13 based on the distribution frequencies modelling in the analysis. The figure shows that both interventions are a good source of micronutrients for young children, although LNS-SQ is nutritionally more comprehensive as it includes pantothenic acid, calcium, magnesium, and macronutrients, while MNP does not.

**Figure 13:** Coverage as a percentage of RNI for a child 12-23 months provided by MNP three times per week (left) and LNS-SQ (right)

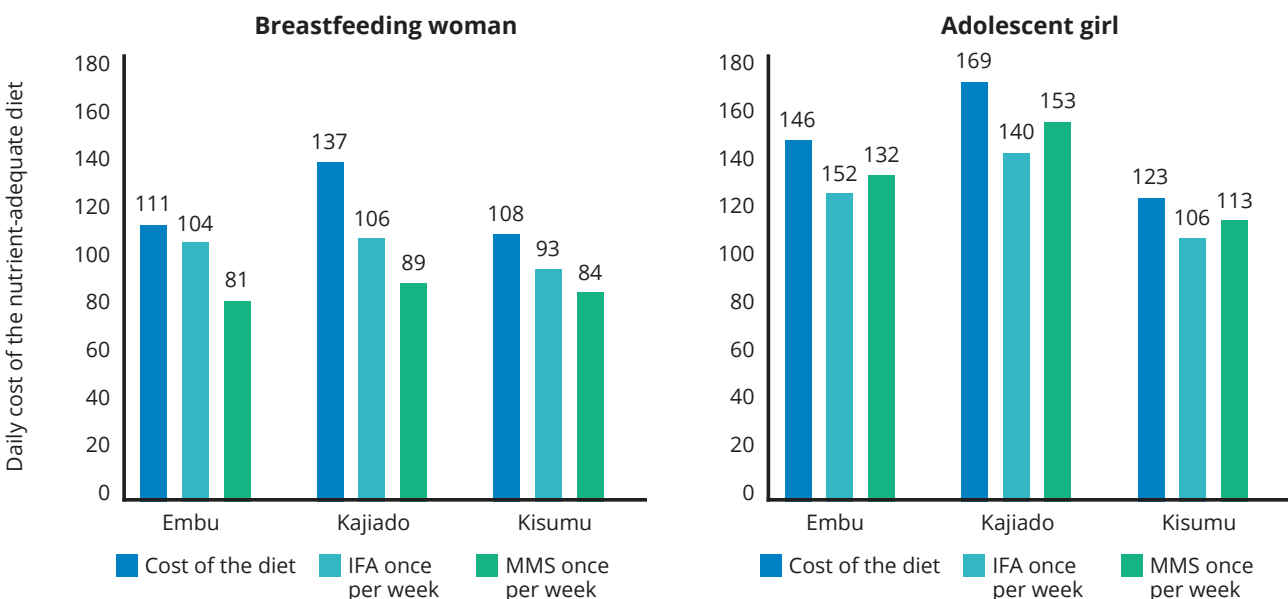


**6. Adolescent girls and pregnant and breastfeeding women are particularly nutritionally vulnerable due to their higher nutrient requirements. Micronutrient supplementation can provide essential micronutrients which support good nutrition, leading to positive impacts.**

A triple burden of malnutrition exists in Kenya with 9 percent of women being underweight, 34 percent being overweight, and an estimated 28 percent suffering from anaemia in 2022 (5-6).

The adolescent girl and the breastfeeding woman account for 60 percent of the total cost of the nutritious diet for a five-person household due to their elevated needs for micronutrients like iron, vitamin B<sub>12</sub> and folate. IFA and multiple micronutrient supplements (MMS) are two possible plus interventions which could target specific nutrition vulnerabilities in women and girls. Both supplements were modelled once per week for the adolescent girl and once per day for the breastfeeding woman. While both effectively reduce the cost of the nutritious diet, the decrease is bigger with the IFA for the adolescent girls due to its higher iron content, and the for the breastfeeding woman there is a bigger decrease with MMT Figure 14.

**Figure 14:** Reduction in the cost of the nutrient-adequate diet after provision of in-kind IFA or MMS, for the breastfeeding woman (left) and the adolescent girl (right)

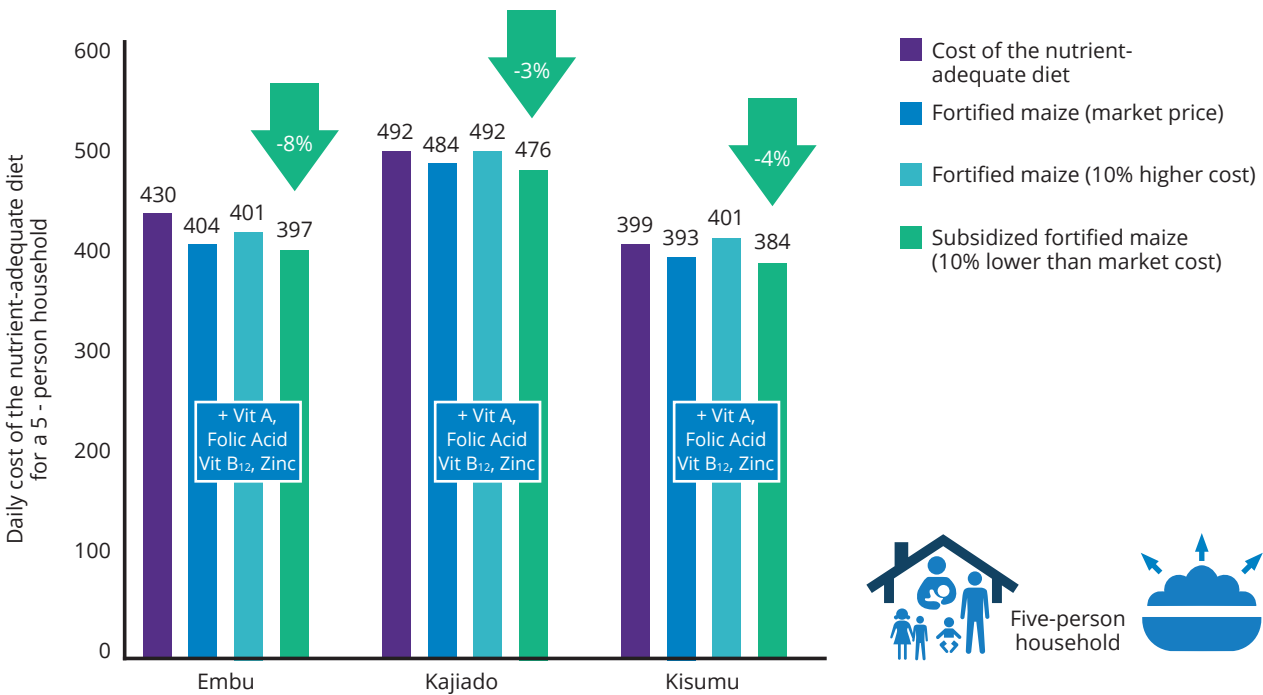


## 7. Large scale fortification is an effective tool to deliver essential micronutrients through commonly consumed staple foods. Subsidising fortified maize meal for UCB beneficiaries can improve micronutrient intake.

Access to fortified maize flour is a good pathway for improving nutrient intakes, as maize flour fortification has been mandatory since 2012 and 87 percent of the population reports regular consumption of maize flour. While many households in Kenya continue to grow and mill their own maize, fortification of maize flour could still effectively reach many households because approximately 40 percent of maize flour in Kenya is industrially processed (7).

Stakeholders identified access to subsidized fortified maize flour as a potential intervention for the general population or specifically as a plus intervention to the UCB. The FNG assumed that roughly 30 percent of energy needs were met by maize flour across modelling areas, equating to consumption of approximately 900 grams of maize flour by a household per day. To assess the impact of fortified maize on lowering the cost of the nutritious diet, regular maize flour was replaced with maize fortified with vitamin A, folic acid, vitamin B<sub>12</sub> and zinc. The inclusion of fortified maize flour was modelled at different price levels as shown in Figure 15. The analysis found that providing maize at the subsidized price of 10 percent less than market price, could lower the cost of the nutrient-adequate diet for the five-person household by 8 percent, 3 percent, and 4 percent in Embu, Kajiado, and Kisumu respectively.

**Figure 15:** Reduction in the cost of the nutrient-adequate diet when including fortified maize flour, under three pricing scenarios



## 8. Nutrition-sensitive agriculture can support dietary diversity and strengthen local food systems. The UCB can provide a platform for assisting households with starting kitchen gardens and homestead production of animal source foods.

Stakeholders identified support for nutritious kitchen gardens as a potential plus intervention to the UCB. The FNG modelled potential gardens based on existing data available for Kenya, and calculated potential impacts of kitchen gardens on households' intake of nutritious foods and incomes, assuming sales of surplus products.

Modelling was carried out for Kisumu and Kajiado and assumed producers in both areas were cultivating a piece of land of 0.2 hectares, based on estimates produced by the Institute of Development Studies (8). Calculations for yields were estimated based on FAO yield data (9) and FAO crop calendars, while information used for estimating wholesale prices was calculated from the International Food Policy Research Institute's (IFPRI) food security monitoring in Kenya (10). Models assume that in Kisumu, 58 percent of the generated income goes towards food purchases while in Kajiado, 59 percent of generated income goes to food purchases (2). The final quantities included in weekly household consumption and weekly sales are provided in Table 3.

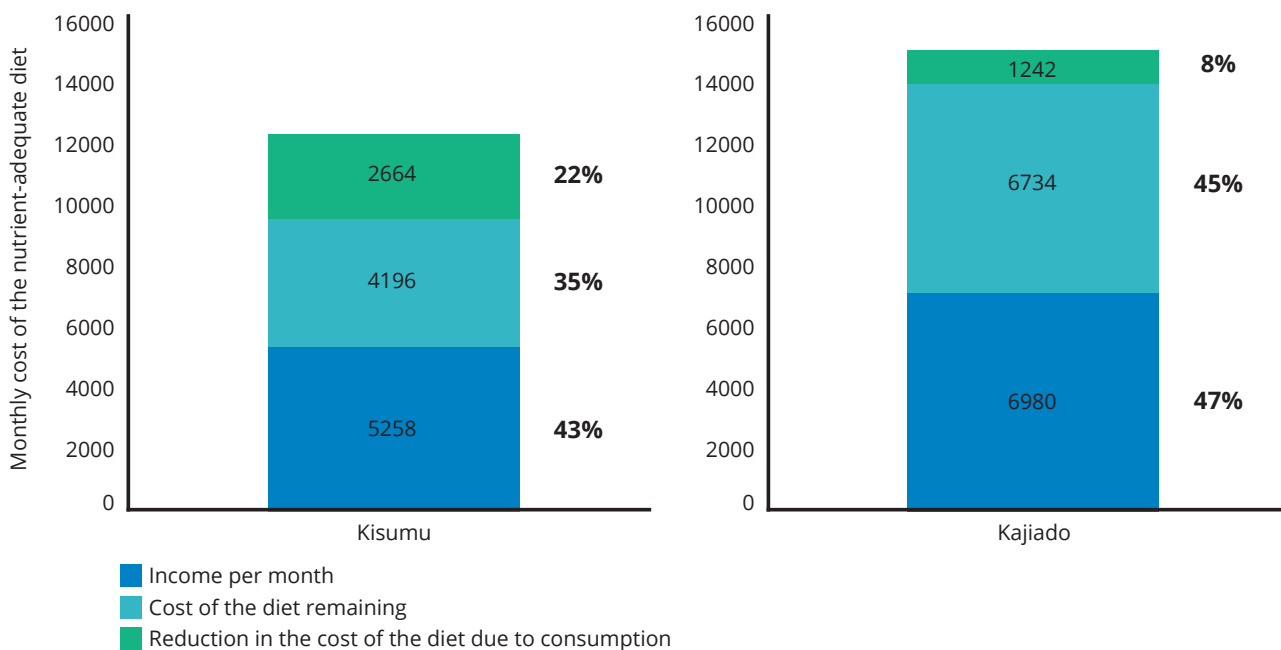
**Table 3:** Description of amounts included for consumption and sale in kitchen garden modelling

| Model                    | Modelling zones           | Amounts consumed by household (weekly) | Amount sold per week (in harvest season - months) |
|--------------------------|---------------------------|--|---|
| Home Garden 1<br>Kisumu  | Orange-flesh sweet potato | 5 kg                                   | ~70 kg (over 3 months)                            |
|                          | Nightshade                | 5 kg                                   | ~ 70 kg (over 7 months)                           |
|                          | Beans                     | 4 kg                                   | ~5 kg (over 12 months)                            |
| Home Garden 2<br>Kajiado | Orange-flesh sweet potato | 5 kg                                   | ~ 290 kg (over 1 month)                           |
|                          | Beans                     | 4 kg                                   | ~3 kg (over 12 months)                            |

The analysis found that the combination of own consumption and sales contribute to covering the total cost of the nutritious diet, as shown in Figure 16. In the figure, each bar represents the monthly cost of a nutritious diet for a five-person household. The reduction due to own consumption is shown by the uncoloured areas denoted by a dashed line and

amounts to 22 percent and 8 percent coverage of the cost of the nutrient-adequate diets in Kisumu and Kajiado respectively. Areas denoted in green represent the estimated value of generated income going towards food purchases, and amount to 43 percent and 47 percent coverage of the monthly household cost of the nutritious diet respectively.

**Figure 16:** Coverage of the cost of the nutritious diet through consumption and sale of produce



In addition to kitchen gardens, stakeholders identified support for homestead production of animal source foods as another potential plus intervention to combine with the UCB. The FNG modelled a potential programme to support dairy production through provision of one milk-producing cow to a household. Modelling assumed that the cow would produce 7.6 litres of milk per day based on a report produced by the Kenya Dairy Board (11), and that the household would consume 1 litre per day and sell the remainder at wholesale prices. As in other models, the total

amount of generated income going to food purchases was adjusted by region (see section on modelling interventions). Modelling assumptions did not take into account the costs of feeding and caring for one adult cow. The analysis found that both consumption of milk and wholesale sales of milk can help to cover the cost of a nutritious diet. Between the three modelling counties, consumption of 1 litre of milk per day covered 6 percent of the household cost of the nutritious diet, while sales covered 32 percent of the monthly cost.

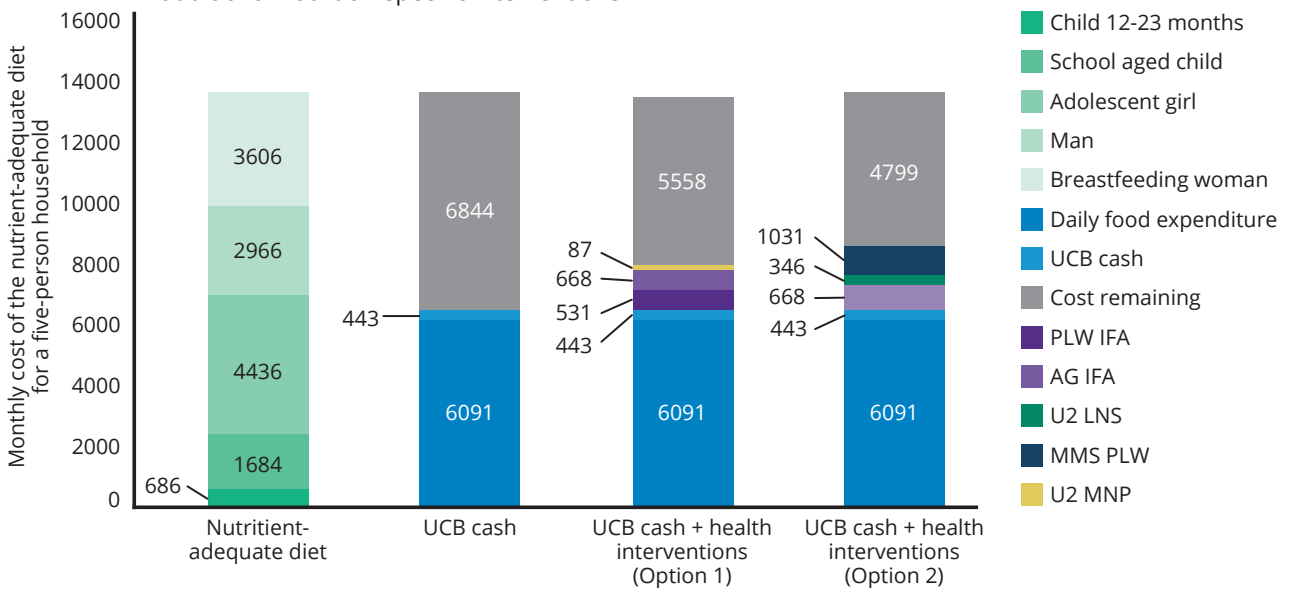
**9.** Cash transfers are most effective when they are part of a broader set of public services, known as “Cash Plus” interventions. Adding multisectoral plus services to the UCB transfer can contribute towards closing a household’s affordability gap.

Figure 17 and Figure 18 show how combining nutrition-sensitive plus interventions on top of the UCB cash transfer can help close the affordability gap. In Figure 17, nutrition-specific or health sector related interventions are layered on top of the UCB, while in Figure 18 nutrition-sensitive market and agricultural interventions are layered, although in reality a combination of both types of interventions could

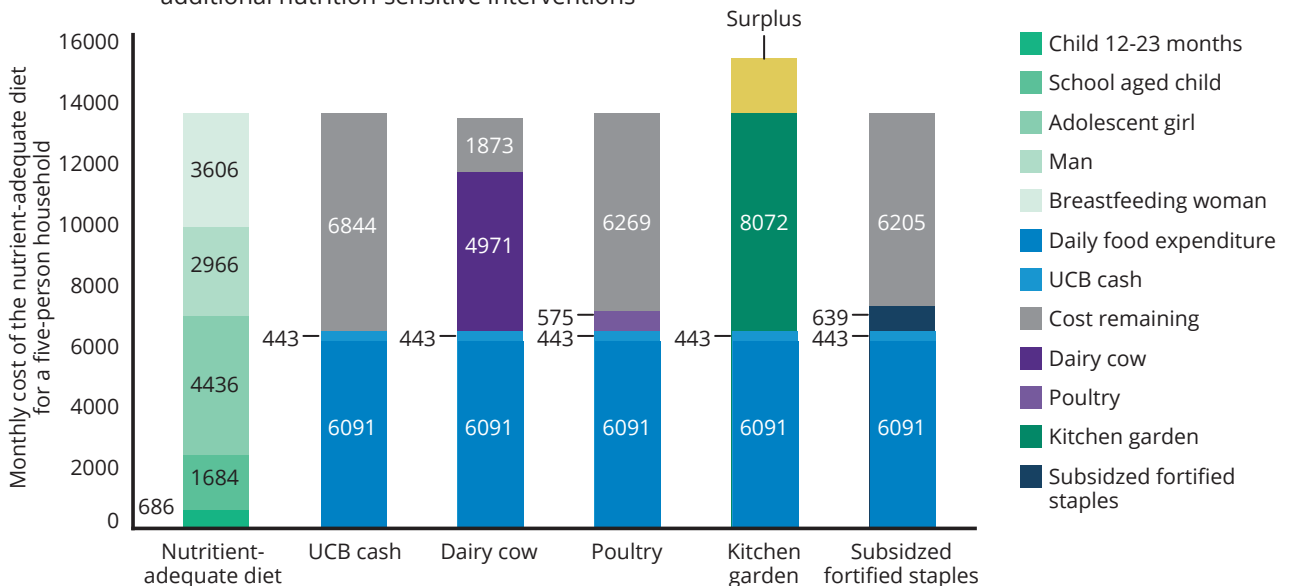
be provided. In each figure, each bar represents the monthly cost of the nutritious diet. With the exception of the bar farthest to the left, each bar shows the average expenditure of the bottom 10<sup>th</sup> percentile (in terms of food expenditure), as well as the UCB cash transfer and additional interventions.

As is shown in the figures, the combination of plus interventions included in a potential UCB package can help to cover the cost of the nutritious diet in various ways. Figure 17 shows that a combination of interventions which target nutritionally vulnerable individuals and address specific nutritional risks can add up to reduce the affordability gap. Figure 18 shows that interventions which increase household incomes or improve their access to nutritious foods, either through own production or through affordable access to fortified foods, can likewise help to close the gap.

**Figure 17:** Coverage of the daily cost of the nutritious diet through the UCB and layering of additional nutrition-specific interventions



**Figure 18:** Coverage of the daily cost of the nutritious diet through the UCB and layering of additional nutrition-sensitive interventions



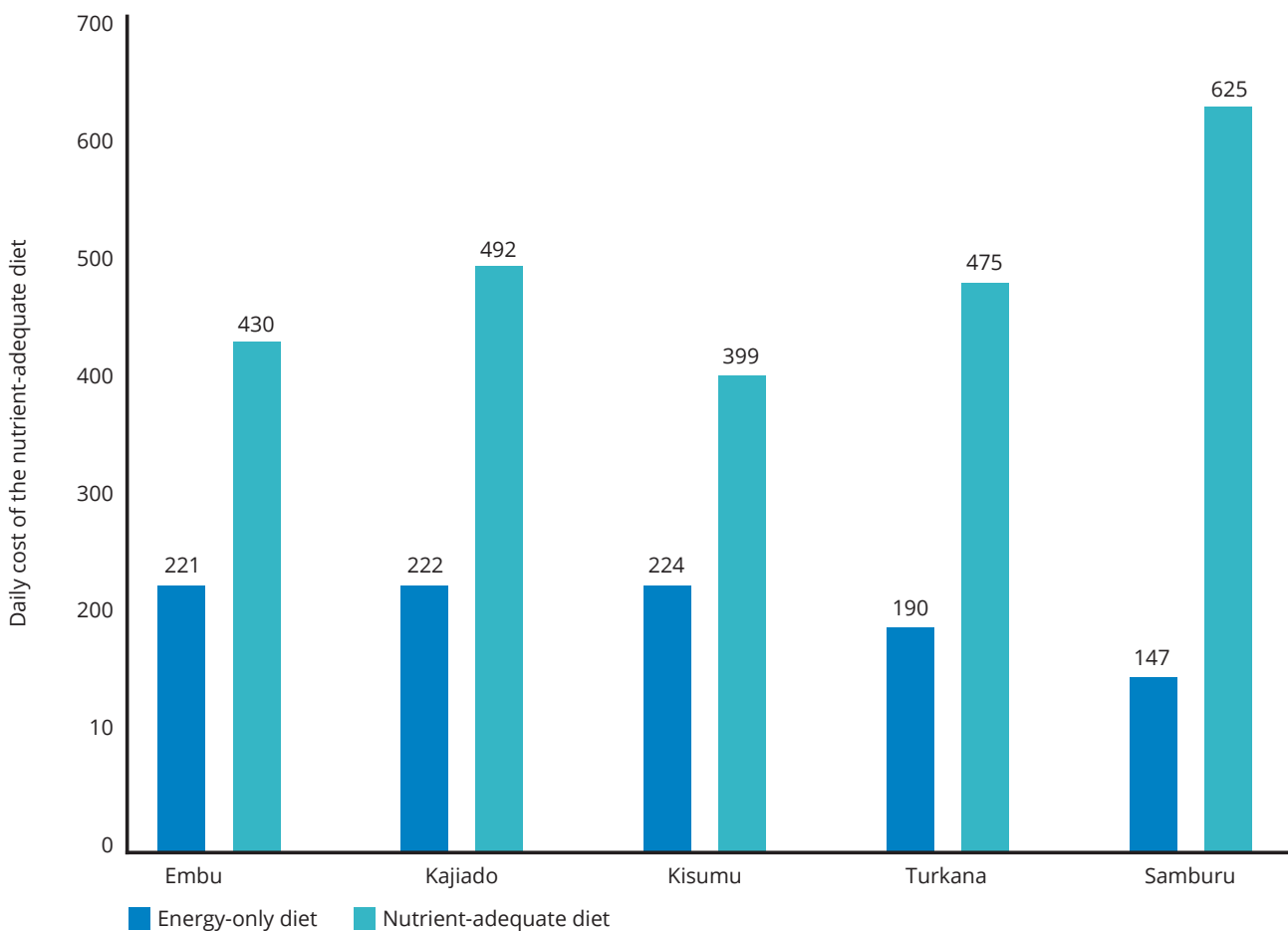


## 10. Food systems across Kenya are diverse and location-specific. UCB Plus interventions should be selected based on local realities and opportunities within local food systems.

The wider aim of the FNG was to contribute to a body of evidence to support scale-up of the UCB across all counties in Kenya. To assess the adequacy of the current value of the UCB cash transfer in other parts of the country, the FNG analysis also calculated diet costs in Turkana and Samburu, two arid and semi-arid (ASAL) counties geographically different from the pilot counties. This analysis drew on retail price data

collected by Save the Children in Turkana and Samburu counties in 2021 (12-13). The price data were adjusted for inflation to bring them up to July 2022 levels to calculate the costs of the energy-only and nutrient-adequate diets. Results for the three pilot counties and two ASAL counties are shown in Figure 19. The costs of energy-only diets in Turkana and Samburu were lower than in the pilot counties; stakeholders suggested this is due to the challenges of sourcing fresh foods in these areas and the additional supply of inexpensive cereals which arrive under humanitarian aid programmes. The cost of the nutrient-adequate diets in Turkana and Samburu are comparatively high, although the cost of the nutrient-adequate diet in Turkana is similar to the cost in Kajiado, while the cost in Samburu is the highest among all counties included in the study.

**Figure 19:** Cost of the energy-only and nutrient-adequate diets in the UCB pilot counties and two ASAL counties, Turkana and Samburu



As reflected in the cost of diets shown in Figure 19, the FNG found that compared to the pilot counties, the ASAL counties had generally higher food prices and a lower assortment of nutritious foods like beans, fruit, vegetables and meat available in market places. This means that plus interventions intended to improve nutrition outcomes in these areas must consider

specificities of food systems. For example, in areas with constrained markets, in-kind provision of specialized nutritious foods would likely have a greater impact on nutrient intake than a fresh food voucher. Local governments would need to consider the delivery of plus services because health and agriculture infrastructure differs between counties.

# Stakeholder recommended priorities

Based on FNG findings, stakeholders prioritized interventions that could improve nutrition, and therefore have recommended these as UCB plus interventions. They identified actions necessary to enable implementation. Given that the UCB enables the household to increase its expenditure, the proposed set of interventions are related to increasing demand for nutritious foods (e.g. through SBC strategies) and services, and provide opportunities for further income generation to improve a household's purchasing power and increasing the supply of nutritious foods.

For the inclusion of plus services with the UCB, the programme must foster linkages with actors and line ministries within the health and food systems. The recommendations specify actions proposed by

stakeholders which are related to further evidence generation, capacity building, engagement and coordination, and intervention design, which will support the UCB to select and further develop relevant plus services.

The primary audience for these recommendations is the UCB programme, which includes stakeholders charged with identifying, developing and implementing plus interventions. The secondary audience is the group of actors necessary for creating an enabling environment for improving access to nutritious diets. This includes civil society actors, private sector actors, line ministries at the central and decentralized level, and governmental partners mandated with improving food security and nutrition.

| <b>Recommendation 1: Strengthen food systems to support beneficiary household access to nutritious foods.</b>  |   |  |
|--|---|--|
| <b>Assist beneficiary UCB households with inputs for initiating kitchen gardens.</b>   | <b>Provide UCB households with access to subsidized fortified food and access to inputs for the production of biofortified foods.</b>   | <b>Promote the production of nutrition-rich animal-source foods among UCB beneficiaries, with a specific focus on fish, dairy, and poultry production.</b>     |
| Target agriculture sector with advocacy messages on integrating kitchen garden initiatives into the UCB.   | Engage with the Kenya Bureau of Standards, the National Food Fortification Alliance service, and partners like NI, among others, to improve availability of adequate quantity and quality of fortified foods in Kenya.  | Generate evidence and promote messages on the nutritional impacts of consumption of animal-source foods.   |
| Generate political momentum and support via multisectoral platforms (County Steering Groups, Agriculture, Nutrition and Environment Statistics Committee from Kenya National Bureau of Statistics, coordination groups under the Kenya Nutrition Action Plan and County Nutrition Action Plans, and Kenya Food Security Steering Group under the drought initiative) at the national and subnational level using evidence on the impact of kitchen gardens on nutrition. | Advocate for scale up in biofortification by engaging Ministry of Agriculture, Livestock, Fisheries and Co-operatives and development partners to facilitate provision of inputs for biofortified crops, like seeds for orange-flesh sweet potato, and extension services on production techniques. | Advocate for Subsize inputs to produce fish and poultry among UCB beneficiaries.   |
| Leverage existing platforms – i.e. the Baby Friendly Initiative, One Million Kitchen gardens initiatives, mother-to-mother support groups.   | Support efforts to strengthen community based fortification options to supplement industrially fortified foods (are communities milling their own flour).   | Strengthen partnerships with Ministry of Agriculture and Livestock and other key partners and Social Protection actors to enable implementation of initiative. |

|  |   |   |
|--|---|---|
| Integrate budgets for kitchen gardens into Country Nutrition Action Plans (CNAPS) and provide clear roles for each sector under CNAP framework.                          | Advocate and support efforts for incorporating fortification at the local-level in local millers (with GAIN, Nutritional International) and draw lessons from other countries who have successfully set up such programs. | In coordination with county governments and local extension services, among other partners, develop training services for beneficiaries on sustainable fishing and poultry production through community demonstrations.         |
| Research the gender and agro-ecological implications of gardens at the sub-county level.   | Strengthen the market surveillance of fortified foods (adherence to standards).   | Support efforts for ensuring adequate infrastructure for fish, poultry and dairy production, including by setting up market linkages between producers and retailers (in coordination with the Ministry of Trade and Industry). |
| Partner with the Ministry of Water, Sanitation, and Irrigation to support hydraulic installations and water management.  | Consider other types of fortified foods for subsidies (e.g. oil) and explore opportunities to provided subsidies for fortified foods to general population.   |   |
| Partner with local organizations, including faith-based, to develop SBC strategies around consumption of nutritious food and positive parenting.                         |   |   |
| Ensure coordination between social protection officers and community health volunteers and extension services through sub-country level coordination mechanism.          |   |   |
| Advocate for subsidized inputs for nutrition-sensitive agriculture including seeds for bio-fortified foods like orange-flesh sweet potato and for fruits and vegetables. |   |   |

**Recommendation 2: Support micronutrient intake of the most nutritionally vulnerable through nutrition-specific interventions.**

| <b>Provide UCB households access to Micronutrient Powder (MNPs)</b>  | <b>Provide IFAs to pregnant and lactating woman and adolescent girls in UCB households.</b>   |
|--|---|
| Conduct further research on acceptability, procurement systems and infrastructure for delivery for MNP at the county level to improve its feasibility.   | Provide sensitization on the importance of IFAs for pregnant and breastfeeding women and adolescent girls to households.  |
| Develop partnerships with national governments (i.e., Kenya Medical Supplies agency), county-level governments, and technical nutrition partners to ensure presence of a supply chain for delivering adequate and timely MNP supplies. | Incorporate messages on IFA for women in the Positive Parenting Initiative to improve uptake.   |
| Coordinate with partners such as the Ministry of Health, Ministry of Education and Directorate of Children Services, among other key partners, on the provision of MNP at child-care facilities and through community/market models.   | Sensitize county-governments on the UCB and the benefits of plus interventions like IFAs to generate support for the inclusion of IFAs into the County Integrated Development Plans.                    |
| Support programs for training health workers on implementation of MNP.   | Strengthen the prioritization, budgeting and consistent supply of IFA through the public health system. Implement strategies to improve awareness and consumption of IFA among the targeted population. |

|  |  |
|--|--|
| Develop trainings programs for UCB clients on how to utilize MNP and feed it to children and generate support and information on use of MNP at the community level through mother-to-mother support groups, change ambassadors and other social and behavior change initiatives. |  |
| Set up a monitoring and evaluation system to allow for course correction and for documenting success stories.  |  |
| Prepare guidelines on the use of MNP for children older than 23 months.  |  |
| Develop a communication strategy to ensure effective messaging on MNP, its utilization and benefits.   |  |
| Sensitize county-governments on the UCB and the benefits of plus interventions like MNP to generate support for the inclusion of MNPs into the County Integrated Development Plans.  |  |

| <b>Recommendation 3: Establish mechanisms to promote to promote the use of the cash transfer for nutritious foods.</b>   |   |
|--|---|
| <b>Provide fresh food vouchers as a top-up to UCB households in areas with functioning markets and supply chains of nutritious foods.</b>  | <b>Develop Social Behaviour Change (SBC) strategy to strengthen knowledge on healthy diets and nutrition, with particular attention on good feeding practices for infants and young children.</b>   |
| Identify national policies which could be amended or are under development for inclusion of fresh-food vouchers.   | Integrate the UCB into the National Policy of Maternal Infant and Young Child Nutrition.  |
| Coordinate with development partners, Kenya National Bureau of Statistics, and Kenya Institute for Public Policy Research and Analysis, among others, to monitor the availability of nutritious foods in a given area, including aspects of production and infrastructure.                                       | Strengthen communication on benefits of adopting good infant and young child feeding practices through initiatives like breast-feeding corners.   |
| Partner with the Ministry of Trade and Industry, Kenya National Chamber of Commerce and Industry, Ministry of Agriculture, Livestock, Fisheries and Co-operatives and other relevant actors to ensure a functioning supply chain for fresh foods by strengthening the capacities of local suppliers and traders. | Encourage participants in Baby-friendly Community Initiative programs to use UCB cash to purchase nutritious foods to prepare complementary feeding recipes for children.   |
| Partner with information and communication technology service providers for voucher design and mobile service providers for voucher delivery.  | Utilize mother-to-mother support groups as opportunities to provide SBC messages on recommended infant and young-child feeding practices using funding from the UCB.  |
| Explore ways of linking the fresh food voucher programme to kitchen garden intervention e.g. by enabling voucher recipients to directly purchase from homestead producers of nutritious foods and allowing producers to cash in vouchers.  | Leverage existing local cookbooks to promote using the UCB cash to purchase foods for nutritious complementary feeding.   |
|  | Design and operationalize monitoring and evaluation and beneficiary feedback mechanisms to assess the implementation and effectiveness of Social Behaviour Change communication on uptake of IYCF practices and spending patterns of UCB beneficiaries. |

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# Acronyms

|        |  |
|--------|--|
| ASAL   | Arid and semi-arid land                                  |
| CNAP   | County Nutrition Action Plan                             |
| CotD   | Cost of the Diet   |
| FAO    | Food and Agricultural Organization of the United Nations |
| FBDG   | Food-based dietary guidelines                            |
| FNG    | Fill the Nutrient Gap                                    |
| IFA    | Iron and folic acid                                      |
| IFPRI  | International Food Policy Research Institute             |
| IYCF   | Infant and Young Child Feeding                           |
| KES    | Kenyan Shillings   |
| LNS-SQ | Lipid-based nutrient supplements – small quantity        |
| MIYCN  | Maternal, infant and young child nutrition               |
| MMS    | Multiple micronutrient supplements                       |
| MNP    | Micronutrient powder                                     |
| NGOs   | Non-governmental organizations                           |
| NI     | Nutrition Institute                                      |
| NSPS   | National Social Protection Secretariat                   |
| RNI    | Recommended Nutrient Intake                              |
| SBC    | Social Behaviour Change                                  |
| UCB    | Universal Child Benefit                                  |
| USD    | United States Dollars                                    |
| WFP    | World Food Programme                                     |

## Contributors

The Kenya UCB FNG Analysis was led by the National Social Protection Secretary (NSPS) and its partners and was coordinated under the leadership of Jane Muyanga, Jacynter Omondi, and Betty Samburu. Special thanks to Richard Obiga and Peter Ombasa of the NSPS for their facilitation of stakeholder engagement. The analysis was made possible by the WFP Kenya Country Office team, with particular thanks to Joyce Owigar, Eunice Mailu, David Kamau, Julius Kisungu, Caroline Chiedo, and Ken Njogu; and WFP Kenya Country office senior management Lauren Landis, Carola Kenngott and Robert Ackatia-Armah for their overall guidance to the FNG. We thank the WFP Regional Bureau Nairobi with particular thanks to Kennedy Nanga, Edith Amondi and Isaac Omondi; the Systems Analysis for Nutrition team at the WFP HQ Nutrition Division, with particular thanks to Zuzanna Turowska, Gregory Sclama, Mysbah Balagamwala, Jo Jacobsen, Jane Badham and Saskia de Pee; and special thanks to all the partners and stakeholders who provided valuable inputs into the process, with particular thanks to UNICEF and Save the Children.

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This Fill the Nutrient Gap Analysis was funded by:



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