ASSESSMENT AND RESEARCH IN CHILD FEEDING (ARCH): LABELING STUDY REPORT NEPAL

Report on commercially produced complementary foods and selected commercially produced foods not specifically marketed for but commonly consumed by infants and young children

KEY MESSAGES

1. Nutrition is central to strengthening the health and development of individuals and nations.
The 1,000 days of a mother's pregnancy until her child's 2nd birthday is a particularly critical window of opportunity during which the right nutrition gives children a healthy start at life.

- The Government of Nepal joined the Scaling Up Nutrition (SUN) Movement in 2011, committing to invest in policies and programs to improve nutrition.
- In Nepal, 41% of children under-five years of age are stunted, never reaching their full cognitive or physical development.

2. Optimal feeding leads to children reaching their full potential.
Exclusive breastfeeding during the first six months of life, with continued breastfeeding until 2 years of age or beyond, together with the addition of safe, appropriate complementary foods from 6 months provides the best nutrition for a young child. To protect these optimal feeding practices, the marketing practices of all products aimed at infants and young children, not only breast-milk substitutes, are under the spotlight.

- In Nepal, early initiation of breastfeeding is 45% and 70% of infants are exclusively breastfed to six months of age.
- In Nepal complementary feeding is initiated between 6-8 months for 66% of infants.

3. Evidence must guide policy development.
Recognizing that commercially produced complementary foods are often a part of a child's diet, Helen Keller International's **A**ssessment and **R**esearch on **Ch**ild Feeding (ARCH) Project is gathering data on the promotion of foods consumed by infants and young children in Senegal, Cambodia, Nepal and Tanzania. As countries work to scale up nutrition, the ARCH Project serves as a resource, providing an evidence base to guide development of policies and programs.

- In Nepal, there are currently 22 different commercially produced complementary foods available for sale to mothers/caregivers.
- In Nepal 86% of commercially produced complementary foods specified an appropriate age of introduction of at least six months. However 75% had similar color schemes/designs, names and/or slogans/mascots/symbols to breast-milk substitutes produced by the same manufacturer.
- In Nepal many of the labels of energy dense commercially produced foods commonly fed to children under the age of two in the study had images, shapes, colours, messages and packaging that could be considered to imply that the product is suitable for children.

4. Consistent information supports informed choices.
Providing consumers with important and valuable information on products labels is critical as it is this information that mothers/caregivers are likely to use to make their product choices when selecting from available commercially produced complementary foods in store.

- In Nepal the information provided on product labels is not presented in a consistent manner.
- In Nepal manufacturers present nutrition information in a variety of formats which makes valuable comparisons difficult.

5. A global market requires global guidance.
There are a number of commercially produced complementary foods available in Nepal, including 22 brands produced by 12 different manufacturers.

- In Nepal the majority of commercially produced complementary foods are imported (64%), predominantly from India. This indicates that, while national governments could take action, shared guidance from the WHO is critical to support common standards of product promotion across member states.
- In Nepal on average, imported cereals cost four times as much as locally produced products.

6. Detailed and specific guidance is required.

There are a number of elements on product labels around which specific guidance is required to ensure that commercially produced complementary foods provide factual information, promote optimal infant and young child feeding and never undermine breast-feeding, while still allowing the right to freedom of choice.

- The Nepal ARCH Project labeling study results highlight areas where detailed global guidance is required and include:
  - provision of clear and consistent infant and young child feeding messages for optimal infant and young child feeding;
  - appropriateness and types of invitations to interact that should appear on the labels of commercially produced complementary foods;
  - provision of nutrition claims;
  - provision of manufacturer endorsed nutrition information tables/nutrition plans.

7. Guidance should not result in unintended consequences.

Consideration needs to be given not only to the promotion of commercially produced complementary foods, but also foods not specifically marketed for but commonly fed to children under-2 years of age. It is important to ensure that restrictions on the promotion of the former do not result in mothers/caregivers selecting the latter, which often have a poor nutrient profile, due to the fact that they are less restricted. As such, foods not specifically marketed for but commonly fed to children under-2 years, can imply to mothers/caregivers that they are suitable for infants and young children as they are able to make nutrition and health claims and are less regulated in terms of images and other marketing techniques used on labels.

- In Nepal the label assessment of selected commercially produced foods for general consumption commonly fed to children under the age of two years shows that certain practices could be considered to imply that these products are suitable for infants/young children or children in general.
- In Nepal the nutrient content of selected commercially produced foods for general consumption commonly fed to children under the age of two years indicate that they are relatively low in protein, high in sugar and high in fat with correspondingly low levels of micronutrients.

8. Monitoring and enforcement of existing policies can be strengthened.

The WHO recommends that countries should periodically review their regulations in line with the Code and its subsequent WHA resolutions and that monitoring and enforcement requires continued strengthening.

- Nepal regulates all products that are marketed as suitable for infants (children under 12 months). The Nepalese legislation contains comprehensive labeling recommendations in line with, and in some cases going beyond, the *International Code of Marketing of Breast-milk Substitutes* in its restrictions.
- In Nepal the ARCH Project labeling study results demonstrate that manufacturers are not fully complying with the Nepalese legislation. For example, 14% of labels of commercially produced complementary foods explicitly stated/implied that the product was appropriate for children under 6 months.

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List of Abbreviations

ARCH	Assessment and Research on Child Feeding (ARCH) Project
BMS	Breast-milk substitute
CPCF	Commercially produced complementary food
CPF	Commercially produced foods for general consumption commonly fed to children < two years
FAO	Food and Agriculture Organization of the United Nations
GUM	Growing-up milks
HKI	Helen Keller International
IBFAN	International Baby Food Action Network
IYCF	Infant and young child feeding
MIYCN WG	Maternal, Infant and Young Child Nutrition Working Group
MNP	Micronutrient powder
UN	United Nations
WHO	World Health Organization
WHA	World Health Assembly

Definitions

For the purposes of this report, definitions of the product categories referred to are defined as follows:

Commercially produced complementary foods (CPCF)	Any commercially produced food or beverage product, excluding breast-milk substitutes, that contains a label indicating the product is intended for children younger than two years of age, by: • Using the words baby/babe/infant/toddler/young child in the context of a child's age e.g. baby food (food for babies), not size/maturity of the product e.g. baby potato (young potato); • Recommending an age of introduction less than two years on the label; • Using an image of a child appearing younger than two years of age or an image/text of infant feeding (which could include a bottle).
Commercially produced foods for general consumption commonly fed to children under the age of two years (CPF)	Foods commonly fed to, but not marketed specifically for, children younger than two years of age e.g. soda/carbonated beverages, 100% juice/juice drinks, bottled water, condensed milk/evaporated milk, chocolate/milk beverages, biscuits/cookies, savory snacks (chips, crisps), sweet snacks (cakes/doughnuts and candy/sweets/chocolate), processed cereals (e.g. maize meal), breakfast cereals, instant noodles and peanut butter).
Breast-milk substitute (BMS)	The *Code* defines a breast-milk substitute as, "*any food being marketed or otherwise represented as a partial or total replacement for breast milk, whether or not suitable for that purpose*" (WHO, 1981). The ARCH Project defines breast-milk substitutes to include: • infant/starter formula (to be used from birth up to six months of age), including formula for special dietary or medical purposes; • follow-up formula (to be used from 6 months to 12 months), including formula for special dietary or medical purposes; • growing-up milk (to be used from 12 months to 36 months) and; • other milk or milk-like products (in liquid or powdered form) marketed or otherwise represented as suitable for feeding children younger than two years of age BUT excludes other beverages and foods marketed or otherwise represented as a partial or total replacement for breast milk. Note: The Breast-milk substitute data is not included in this report.

For the purposes of this report, it is important to provide clarity between the interpretation and use of the terms 'marketing' and 'promotion' and their use in context of the ARCH Project:

Marketing: Defined by Article 3 of the *International Code of Marketing of Breast-milk Substitutes* (the *Code*) as **distribution, selling, product promotion, advertising, product public relations, and information services** (WHO, 1981). With regards to the Code, the distribution and selling of designated products is allowed.

Promotion: Marketing techniques to increase sales (**advertising, sampling, or any other activity to encourage or induce the purchase of a product**) (IBFAN, 2007). Promotion is a type of marketing activity. With regards to the *Code,* the promotion of designated products is not allowed. Examples of promotion techniques include discounts, coupons, gifts, samples and adverts.

From the *Code Training Manual, Making Sense of the Code: Hand-outs* (IBFAN-ICDC, 2006):

- The term "**appropriate marketing**" should not be confused with "**appropriate promotion**". There is an absolute prohibition of the promotion of designated products, but some forms of marketing (such as distribution and selling) are allowed. "**Appropriate marketing**" refers to distribution and selling (but does not include promotion and advertising).
- In addition one should not confuse **promotion** of products with **availability** of products.
- One also needs to distinguish between "**public promotion**" and "**promotion within health facilities**".
- The cornerstone of the Code is the prohibition of the promotion of products which undermine breastfeeding.
- Promotion to the public occurs via: TV/radio advertising, newspapers, magazines, billboards, websites, special offers, reduced prices, discount coupons, mailing to pregnant women and mothers of educational materials, phone help lines, posters, calendars in the offices of health professionals, free gifts, samples issued from health facilities.
- Art. 5.1 of the Code states that: There should be no advertising or other form of promotion to the general public of products that fall within the scope of the Code.

In terms of international guidance, the main reference documents used in the ARCH Project all refer to **marketing**:

- *International Code of **Marketing** of Breast-milk Substitutes* (1981)
- *Using the Code to Guide **Marketing** of Complementary Foods to Protect Optimal IYCF Practices* (2010)
- *WHO Set of Recommendations on **Marketing** of Foods and Non-alcoholic Beverages to Children* (2010)

These documents see promotion as a sub-element of marketing.

The WHA Resolutions that are of specific reference to the ARCH Project however refer to **promotion**:

- *WHA Resolution 63.23 (2010):* 1. URGES Member States to: (1) to end **inappropriate promotion** of food for IYC and to ensure that nutrition and health claims shall not be permitted for foods for IYC, except where specifically provided for, in relevant Codex Alimentarius standards or national legislation;
- *WHA Resolution 65.6 (2012):* 3. REQUESTS the Director-General: (1) to provide clarification and guidance on the **inappropriate promotion** of foods for IYC cited in resolution WHA63.23, taking into consideration the on-going work of the Codex Alimentarius Commission;

This can result in some confusion as to when the definition of marketing applies versus the definition of promotion in the context of the ARCH Project. The ARCH Project Labeling study evaluates both **promotion and marketing practices**.

1 INTRODUCTION

1.1 Background

There is an increasing global focus on infant and young child feeding practices, as the 1,000 Days window of opportunity (conception to two years of age) has been recognized as key to improving infant and young child health outcomes. Evidence based interventions to address the high rates of infant and young child undernutrition and morbidity include the promotion of exclusive breastfeeding from birth to six months postpartum and continued breastfeeding to two years and beyond along with complementary feeding from the age of six months (PAHO, 2003; WHO, 2003). Meeting the high nutritional requirements from the age of six months is especially challenging when children's diets are low in micronutrients and high quality protein/fat, or high in factors that inhibit absorption of nutrients. The WHO Global Strategy for Infant and Young Child Feeding (WHO, 2003) states that its aim is to "improve – through optimal feeding – the nutritional status, growth and development, health, and thus the survival of infants and young children." The objectives of the strategy include "providing guidance on appropriate complementary feeding with emphasis on the use of suitable locally available foods which are prepared and fed safely and promoting adequate intake of essential nutrients through access to suitable – including fortified – local foods and, when necessary, micronutrient supplements".

This has placed the marketing practices of all products aimed at this critical stage, not only breast-milk substitutes, under the spotlight. Commercially produced products, such as fortified complementary foods, micronutrient supplements, and other foods consumed by young children, need to be promoted in a way that protects and promotes optimal infant and young child feeding, including breastfeeding and the consumption of high-quality local foods.

A history of inappropriate marketing of breast-milk substitutes by the food industry (Aguayo *et al*., 2003; Ergin *et al*., 2013; Salasibew *et al*., 2008; Taylor, 1998) has contributed to decreased breastfeeding rates in many parts of the world and associated increases in infant morbidity and mortality, especially in resource poor countries (Brady, 2012). The International Code of Marketing of Breast-milk Substitutes (the *Code*) was developed by the WHO to address inappropriate harmful marketing practices of products directly promoted for children under 6 months of age that therefore interfere with exclusive breastfeeding (WHO, 1981). However, no international guidance is available to address the promotion of foods consumed by children ages six months and above and few data have been collected to document current promotion practices of these foods.

In addition, many low income families spend a percentage of their limited financial resources on commercially produced foods of poor nutritional quality, such as biscuits/cookies, chips and crisps, cake/doughnuts, candy/sweets/chocolate and soda/carbonated/sweetened beverages (Anderson *et al*., 2008; MOHP *et al*., 2007). In the case of infants and young children, these may compete with optimal home-prepared, local foods or commercially produced fortified complementary foods. However, there is insufficient information about whether these foods are promoted in a way that implies they are appropriate for young child feeding. Policy makers could benefit from a clearer understanding of promotional efforts being carried out for these products.

1.2 WHO STAG proposed definition of inappropriate promotion of foods for infants and young children

In May 2012, resolution 65.6 of the Sixty-fifth World Health Assembly requested the Director General to provide clarification and guidance on the inappropriate promotion of foods for infants and young children (WHA, 2012). In response WHO established a Scientific and Technical Advisory Group (STAG) on Inappropriate Promotion of Foods for Infants and Young Children that held its first meeting in June 2013 (WHO, 2013a). This group developed a *Technical paper on the definition of inappropriate promotion of foods for infants and young children* (WHO, 2013b). A report on this paper, *Inappropriate promotion of foods for infants and young children* was presented as Annex 2 to the Maternal, Infant and Young Child Report (EB 134/15) to the Executive Board at its meeting in January 2014 (WHA, 2014). The STAG has suggested five provisional criteria that could be used to evaluate whether or not promotion of foods for infants and young children is considered to be appropriate.

The STAG suggests that:
"…promotion of foods for infants and young children is inappropriate if:

1. It undermines recommended breastfeeding practices;
2. It contributes to childhood obesity and non-communicable diseases;
3. The product does not make an appropriate contribution to infant and young child nutrition in the country;
4. It undermines the use of suitable home-prepared and/or local foods;
5. It is misleading, confusing, or could lead to inappropriate use." (WHA, 2014)

The STAG meeting report provides further details on each of the five criteria (WHO, 2013a).

The results of this labeling study (whereby labeling is considered to be a sub-set of promotion practices) will present and classify the findings of the labels of products available in Nepal, where possible, according to these five criteria. Results that are not considered to form part of these five criteria will be reported as a separate category named 'Other'.

1.3 Assessment and Research on Child Feeding (ARCH)

In response to WHA resolution 65.6, Helen Keller International's (HKI) 'Assessment and Research on Child Feeding' (ARCH) Project gathered information on the promotion of foods consumed by infants and young children under the age of two years. This project collected quantitative data in four low and middle income countries (Cambodia, Nepal, Senegal and Tanzania) using three types of studies in each country.

The labeling study, the results of which are described in detail in this report, assessed the labels of commercially produced complementary foods based on the document *'Using the Code of Marketing of Breast-milk Substitutes to Guide the Marketing of Complementary Foods to Protect Optimal Infant Feeding Practices*' (Quinn *et al*., 2010) and using the methodology developed by Sweet *et al*. in South Africa (2012a; 2012b). In addition, this study also assessed labels of a sample of commercially produced foods for general consumption that are commonly fed to, but not directly marketed for, infants and young children under the age of two years, such as soda, savory snacks (chips, crisps), biscuits/cookies and other sweet snacks (cakes/doughnuts, candy/sweets).

A component of the labeling study that assesses the labeling of breast-milk substitutes compared to a set of criteria based on the *Code* and subsequent relevant World Health Assembly (WHA). Resolutions will be reported on elsewhere.

A second study has assessed the retail promotion of breast-milk substitutes, commercially produced complementary foods and a sample of commercially produced foods for general consumption commonly fed to children under the age of two years in selected retail outlets in each site. This study is reported on elsewhere.

A third study has collected information from mothers of children under the age of two years on promotional practices inside and outside health facilities for breast-milk substitutes, commercially produced complementary foods and commercially produced foods for general consumption that are commonly fed to, but not directly marketed for, infants and young children under the age of two years. Mothers are also asked about health system practices surrounding infant feeding advice and support. Additionally, they are being questioned about foods commonly consumed by young children (home-prepared and commercially produced complementary foods and commercially produced foods for general consumption). The results of this study will be reported elsewhere.

This research is not meant to be a replacement for *Code* monitoring, which in its entirety includes other components not included in this research. “Code monitoring requires the investigation of promotion to the public in all its forms, promotion in health care facilities (including observation of materials and equipment present in the health facility, analysis of informational materials provided to health care staff and pregnant women and mothers), labeling, promotional practices in shops and pharmacies and interviews with health workers” (David Clark, personal communication).

1.4 Background to the labeling study

Food labels function as a vehicle for food marketing, promotion and advertising (via label vignettes, promotional information and the use of claims), as well as providing basic product information and health, safety and nutrition information to the users of the product (CFIA, 2011). Failure of the labels of foods fed to infants and young children to perform these functions adequately and in an appropriate manner can undermine the nutritional status of the child by increasing the risk of inappropriate use of the product and by undermining optimal infant and young child feeding (IYCF) practices. It was therefore deemed necessary to identify current labeling practices for such foods in order to monitor adherence to existing guidance on the appropriate labeling of foods for infants and young children, and to inform the strengthening and development of guidelines. This study has identified current labeling practices for commercially produced complementary foods and a sample of commercially produced foods for general consumption that are commonly fed to, but not directly marketed for, infants and young children under the age of two years.

This report only addresses the labeling of commercially produced complementary foods and commercially produced foods for general consumption that are commonly fed to, but not directly marketed for, infants and young children under the age of two years.

1.4.1 Labeling of commercially produced complementary foods

Complementary foods, introduced from six months together with continued breastfeeding to two years and beyond, should complement rather than compete with breast milk in the diet. There are concerns that the inappropriate marketing of complementary foods could undermine optimal breastfeeding practices (Lutter, 2003; Piwoz *et al*., 2003) by, for example, encouraging the early introduction of complementary foods or recommending an excessively large daily ration of the product that could interfere with continued breastfeeding (Quinn *et al*., 2010). Incorrect use of complementary foods (such as excessive dilution, inadequate or excessive intake and unhygienic preparation) also has the potential to undermine rather than promote good nutrition (Faber *et al*., 2005; Lutter, 2003;

PAHO, 2003). It is therefore crucial that manufacturers, distributors and retailers of commercially produced complementary foods and national governments receive and implement guidance on how to market these products in a manner that protects and promotes optimal infant and young child feeding, including exclusive and continued breastfeeding and the use of a variety of locally available, appropriate and nutritionally adequate foods (Clark & Shrimpton, 2000).

The *Code* was designed to address breast-milk substitutes and so offers little guidance on the marketing of complementary foods as they are not included in the scope of the *Code* unless they are marketed or represented as a partial or total breast-milk substitute (WHO, 2008). The lack of formal guidelines from international normative bodies on the appropriate marketing of complementary foods, which are acknowledged as having a role to play in optimal infant and young child feeding, led to resolution 65.6 at the 65th WHA in 2012 to request that the Director-General "provide clarification and guidance on the inappropriate promotion of foods for infants and young children cited in resolution WHA 63.23, taking into consideration the on-going work of the Codex Alimentarius Commission" (WHA, 2012).

In recognition of the need for interim guidance, between 2007 and 2010, the Maternal, Infant and Young Child Nutrition Working Group (MIYCN WG) of the 10 Year Strategy to Reduce Vitamin and Mineral Deficiencies developed a working paper "*Using the Code of Marketing of Breast-milk Substitutes to Guide the Marketing of Complementary Foods to Protect Optimal Infant Feeding Practices"* (Quinn *et al*., 2010). This document provides practical guidance on how the marketing of commercially produced complementary foods and supplements can be guided by the *Code* in a manner that supports optimal infant and young child feeding. This preliminary guidance, if field-tested, could lead to the generation of evidence towards what could be considered "appropriate" and "inappropriate" and could be used to inform future guidelines (Quinn *et al*., 2010), as requested in WHA 65.6.

There is only one published study that provides quantitative data on labeling practices of commercially produced complementary foods. The study by Sweet *et al*. (2012a; 2012b) field-tested the interim guidance in South Africa, in an effort to assess if it could serve as a tool for use by manufacturers and national governments for guiding the appropriate labeling of complementary foods. The study assessed 160 product labels against a checklist developed from *Using the Code of Marketing of Breast-milk Substitutes to Guide the Marketing of Complementary Foods to Protect Optimal Infant Feeding Practices.*

The study found that none of the labels complied with all the checklist criteria (see Table 4-4 in section 4.2 of the Results). The authors found the checklist to be useful but also recommended some changes and additions to the guidance provided by the document upon which it was based.

The ARCH Project assessed the labels of commercially produced complementary foods purchased in four low and middle income countries, using a checklist that was based on that developed by Sweet *et al*. but that also included their revisions (2012a; 2012b), in order to gather data from additional countries. This study therefore adds to the body of evidence required to inform the WHO and its STAG in developing guidelines for the appropriate marketing of complementary foods as requested by WHA 65.6.

1.4.2 Labeling of commercially produced foods for general consumption that are commonly fed to, but not directly marketed, for infants and young children under the age of two years

In addition to breast-milk substitutes and commercially produced complementary foods, there is a group of commercially produced foods for general consumption that are commonly fed to infants and young children in low and middle income countries. These products are often considered to be of a poor nutritional quality and to compete with more optimal complementary foods and/or breast milk in the diet, therefore potentially undermining appropriate breastfeeding and complementary feeding practices and potentially affecting the nutritional status of infants and young children (Huffman *et al.,* 2014).

These products may include soda/carbonated beverages, bottled water, condensed milk/evaporated milk, chocolate/malt beverages, other sweet beverages (e.g. fruit juices, probiotic drinks), biscuits/cookies, savory snacks (chips, crisps), sweet snacks (cakes/doughnuts and candy/sweets/chocolate), processed unfortified cereals, breakfast cereals, instant noodles, peanut butter, yoghurt and other commonly consumed desserts. These products may or may not be of poor nutritional quality, depending on their composition. For example, peanut butter and yoghurt could be considered nutritious or could contain excessive amounts of sugar. It was thus considered important to assess how such products are marketed and if their nutritional profiles can be considered optimal for young child feeding. Commercially produced foods for general consumption that are commonly fed to, but not directly marketed for, infants and young children under the age of two years also need to be promoted in a way that does not undermine optimal infant and young child feeding, including breastfeeding and the consumption of high-quality local foods.

In recent years, international, regional and national documents have been developed that provide guidance on the marketing (as well as the packaging and labeling) of foods and beverages to children. Most documents recommend that marketing directed to children should not be misleading and should not take advantage of a child's naivety (WHO, 2004).

A WHO Forum and Technical Meeting stated that "*exposure to the commercial promotion of energy-dense, micronutrient-poor foods and beverages can adversely affect children's nutritional status*" and recommended the development of an international code on marketing of food and beverages to children (WHO, 2006).

Formal recommendations as to the guidance suggest that "there should be no marketing to children of energy-dense, nutrient poor foods that are high in fat, sugar or salt and brands associated with such foods" (CI, 2008). These recommendations also suggest that non-broadcast techniques be included as part of the definition of marketing. Non-broadcast techniques include overall presentation, content, language, colors and images used; whether children are represented; use of cartoon characters; the inclusion of free gifts, toys or collectible items with appeal to children; and the inclusion of competitions, vouchers or games with appeal to children (i.e. anything that could make the product appear to be intended for consumption by children). In 2010, the WHO released a set of recommendations on the marketing of foods and non-alcoholic beverages to children. These recommendations call for an overall reduction in all forms of marketing to children of foods high in saturated fats, trans fatty acids, free sugars or salt - especially in settings

where children gather such as nurseries, schools, pre-schools, playgrounds, clinics, sporting and cultural activities (WHO, 2010).

Various companies that produce such food products and the industry associations that represent the manufacturers of these foods have also developed self-regulatory guideline documents and issued pledges, but these are considered difficult to assess due to the inconsistency in implementation, together with the subjectivity of the guidelines themselves (IASO, 2012).

It is clear that significant attention is being paid to the marketing of food and beverages directly to children, especially the marketing of energy-dense, nutrient poor foods that are high in fat, sugar and/or salt. However, it is generally accepted that children only begin to recognize brands from about three years of age (Fischer *et al*., 1991; McAllister & Cornwell, 2010), and so the caregiver would have the dominant influence over what products are bought to be fed to younger children, who are themselves too young to be directly affected by marketing strategies. Little attention has been given to the possible effect that the marketing of such products may have on the caregiver's perception of the suitability of the product for infants and young children. Since this study is concerned with the labels of foods and beverages for children under the age of two years, it is necessary to gather information on the label content of commercially produced foods for general consumption that are commonly fed to, but not directly marketed for, infants and young children in order to assess if the label content contributes to the appearance that the product is appropriate or offers nutritional benefits for a child under the age of two years.

There is research to demonstrate that the information provided on food labels influences the consumers' choices to purchase a specific product (Campos *et al*., 2011). A study done by Page *et al*. (2008) that assessed the packaging of breakfast cereals discussed the impact of the product packaging on both children and parents, and recommended that more research be done to determine how various packaging techniques influence decisions made regarding the purchase of cereals for children.

A study by Barennes *et al.* (2008) investigated reasons for the misuse of a particular brand of coffee creamer as an infant food in Laos.

It was found that the use of a logo, a cartoon baby bear being held by its mother in the breastfeeding position, on the front panel of Bear Brand coffee creamer resulted in almost half of the adults surveyed believing that the product is "good for infants" or "a replacement for breast milk", despite a written warning to the contrary and a picture of a bottle with a cross through it being provided on the back panel. This is an example of how a product that is inappropriate for infant and young child feeding can be misrepresented as such.

Further research is necessary to define appropriate and inappropriate labeling practices by manufacturers and distributors of commercially produced foods for general consumption that are commonly fed to, but not directly marketed for, infants and young children under the age of two years. This is especially important for products that are energy-dense, nutrient poor and high in fat, sugar and/or salt.

1.4.3 Nutrient composition

Supporting optimal infant and young child feeding practices also requires ensuring that complementary foods are nutritionally adequate – providing sufficient (quality and quantity) energy, macronutrients and micronutrients to meet a growing child's needs (WHO, 2003). Infants require nutrient-dense foods due to their high nutritional requirements relative to their body size and because they consume small amounts of food (Faber, 2005).

Increasing urbanization, reliance on a cash economy, and employment of women outside of the home have contributed to a growing demand for commercially produced complementary foods that are quick and easy to prepare (Euromonitor International, 2011; Lutter, 2003; Van der Merwe *et al*., 2007). Such products are an important option for some mothers who have the means to buy them and the knowledge and facilities to prepare and feed them safely (WHO, 2003).

This study therefore gathered the nutrition information provided on the labels of commercially produced complementary foods and commercially produced foods for general consumption that are commonly fed to, but not directly marketed for, infants and young children under the age of two years in order to make this information available for future analysis, linear programming studies and to supplement national food composition tables where the nutrient composition of commercially manufactured products are not available. For selected product categories, the nutrient composition of the products is described and compared to selected nutrition composition guidelines for foods for infants and young children.

1.5 Infant and young child nutrition and feeding context in Nepal

According to the Nepal Demographic Health Survey 2011 (NDHS 2011), 41% of children under five years of age in Nepal are stunted, 11% are wasted and 29% are underweight (MOHP, 2012). Nepal has signed up to the Scaling Up Nutrition (SUN) movement, demonstrating its commitment to improving the nutritional status of its people, with a focus on the first 1,000 Days.

Early initiation of breastfeeding, within one hour after delivery, is 45% (UNICEF 2013). Seventy percent of infants under-six months of age are exclusively breastfed and 93% of young children continue breastfeeding until 24 months of age.

Bottle feeding of children under-24 months is minimal at 6% (MOHP, 2012). The introduction of solid, semi-solid or soft foods at 6-8 months is 66% (UNICEF, 2013).

The 2006 Demographic Health Survey in Nepal found that 21% of infants 6-8 months of age, 35% of those 9-11 months of age and 55% of those 12-23 months of age ate sugary snack foods (defined as biscuits, sweets, candies, chocolates, pastries or cakes) during the previous day (MOHP, 2007). An IFPRI 24 hour recall survey of young children in 16 districts in Nepal reported consumption of savory snacks such as chips or *dal mat* (*chanachur*), and sweet snacks including biscuits, candies, chocolates, or other sweets to be 52% at 9-11 months and 63.5% at 21-23 months of age (Menon, personal communication March 2013).

1.5.1 Relevant legislation

In 1992, Nepal passed the *Mother's Milk Substitutes (Control of Sale and Distribution) Act* to enact the *International Code of Marketing of Breast-milk Substitutes* (Nepal Govt, 1992). This Act regulates all products that are marketed as suitable for infants (defined as a child

under the age of 12 months). The legislation is considered by UNICEF to be 'an all provisions law' (UNICEF, 2011) and it contains comprehensive labeling recommendations (dealt with in Clause 11: Labeling of Products), which in many cases is similar to the Code and in some instances extends beyond the Code in its restrictions.

In addition, Nepal has a *Food Regulation, 2027 (1970)* that regulates the sale, distribution, and marketing of packaged foods in Nepal (Nepal Gazette, 1970). This regulation provides minimum requirements for the labels of all packaged foods in Nepal, including language requirements.

1.5.2 Previous associated research

In Nepal there have been some studies on determinants of breastfeeding and complementary feeding practices, but there have only been two small studies that researched limited aspects of food labels and complementary foods.

In 2009, Koirala et al. conducted a cross-sectional survey within the Kathmandu Valley to assess the availability of nutrition and health claims on the labels of food products (intended for both adults and children) (Koirala, et al., 2009). Products that were assessed, although no definitions of the categories are provided, included infant food and 'weaning' foods, noodles, biscuits, supplementary foods, breakfast cereals and some beverages. The results showed that almost half of the products that included a nutrition claim did not provide nutritional information**.**

The authors recommended that appropriate regulatory supervision of food products is required in Nepal and suggested that the Department of Food Technology and Quality Control (DFTQC) should take the lead in this regard. Furthermore, the authors recommend that products should be registered before being marketed locally and that nutrition or health claims should be verified by DFTQC following lab analysis or by review of documents issued by a competent authority for imported products.

During 2012, Development Alternatives Incorporated (DAI), in conjunction with the Government of Nepal's Department of Food Technology and Quality Control (DFTQC), conducted a market analysis of complementary foods in Nepal (Magnani, et al., 2012).

This research investigated, both quantitatively and qualitatively, the supply chain of the various complementary foods available in Nepal, and aimed to determine how the production of affordable, nutritious, hygienic and 'quick-to-prepare' complementary foods could be increased. The study described the various cereal-based complementary foods that were found to be available in stores in Kathmandu, described the manufacturers, nutrition composition information and cost, and provided examples of selected label content.

The main recommendations of the study were that the DFTQC's capacity to develop standards for complementary foods should be strengthened, the capacity to produce processed fortified complementary foods should be strengthened and household nutrition awareness should be improved.

In the light of the available research in Nepal, a comprehensive assessment of the marketing and promotion (including labeling practices) of commercially produced foods

marketed for, or commonly fed to, infants and young children under the age of two years, as undertaken by the ARCH Project, was considered to be valuable in providing the evidence base to guide the development of policies and programs related to infant and young child nutrition.

2 AIMS AND OBJECTIVES

The aim of this cross-sectional study was to describe the extent to which the labels of commercially produced foods marketed for, or commonly fed to, infants and young children under the age of two years in Nepal comply with both local and international guidance on the marketing of such foods and to describe the practices observed.

2.1 Primary objectives

1. To assess the labels of commercially produced complementary foods purchased in selected stores in one of the largest cities/metropolitan areas in Nepal against labeling guidance provided in *'Using the Code of Marketing of Breast-milk Substitutes to Guide the Marketing of Complementary Foods to Protect Optimal Infant Feeding Practices'* (Quinn *et al*., 2010) and subsequent relevant WHA Resolutions using an adaptation of the methodology developed by Sweet *et al*. (2012a; 2012b) in South Africa, and to describe the labeling practices observed.

2. To document selected label content provided on the packaging of selected commercially produced foods for general consumption that are commonly fed to, but not directly marketed for, infants and young children under the age of two years purchased in selected stores in one of the largest cities/metropolitan areas in Nepal, in order to describe the labeling practices observed.

2.2 Secondary objectives

1. To report on the nutrient composition as stated on the product label of commercially produced complementary foods and commercially produced foods for general consumption that are commonly fed to, but not directly marketed for, infants and young children under the age of two years purchased in selected stores in one of the largest cities/metropolitan areas in Nepal.

2. To compare the labels of commercially produced complementary foods to selected requirements of relevant national legislation in Nepal, in order to determine adherence to national regulations that differ from those addressed by *'Using the Code of Marketing of Breast-milk Substitutes to Guide the Marketing of Complementary Foods to Protect Optimal Infant Feeding Practices'*. To determine whether or not the checklists used in this study provided a practical tool for the monitoring of food labels of this group of products. This aspect of the research will be undertaken in 2015.

3 METHODS

3.1 Study Design

Products, based on the definitions used in the study, that were determined to be commercially produced complementary foods and selected commercially produced foods for general consumption commonly fed to children under the age of two years available for sale in the largest metropolitan area of Nepal were purchased and the information on their labels were captured and analyzed.

To ensure a consistent methodology in the four study countries, training was provided to the HKI Country staff and consultants responsible for data collection for the labeling study. For all three phases of the data collection process, activity plans were developed providing detailed instructions for each activity within each phase of the research. To verify consistency, country staff, were trained on how to record the exact steps outlined in the activity plan so as to develop an activity report for each phase. The activity reports were monitored by the research team.

3.2 Research setting

Data collection was conducted in the urban areas of the Kathmandu Valley. The Kathmandu Valley comprises 6% of Nepal's population (MOPH et al., 2012). Although the food products available in the Kathmandu Valley may not be fully representative of the entire country, based on research conducted by Sweet et al. (2012a; 2012b), it was expected that the majority (80%) of the products available nationally would be available in the largest metropolis.

3.3 Selection and sampling of products and stores

An initial scoping phase sought to identify all commercially produced complementary foods available for purchase in the country. For the commercially produced foods for general consumption commonly fed to children under the age of two years, a strategically selected sample of these products was obtained for the study.

A three-phased approach was used to collect data for the study:

3.3.1 Phase 1: Scoping the market

3.3.1.1 Commercially produced complementary foods:

Distributors and manufacturers of commercially produced complementary foods, their brands and products were identified using a combination of methods. HKI country staff developed an inventory of the commercially produced complementary foods available in Nepal by visiting stores and physically writing down all complementary food products that were available for sale. In addition, they contacted the local offices of manufacturers/distributors (including retailers/wholesalers) of these products and requested a list of all the brands and product descriptions available for sale in the country, as well as requesting from government authorities any lists of registered commercially produced complementary foods that were available in the country. Finally a search of any commercially produced complementary food market analysis reports conducted in the country together with an internet search of manufacturer websites as well as any other available documents, to obtain a comprehensive view on commercially produced complementary foods available in the country, was undertaken.

Using this information, a master list of all known commercially produced complementary foods available in Nepal was compiled. For the commercially produced foods for general consumption commonly fed to children under the age of two years, a list of a subset of such

products in Nepal was compiled from scientific literature and interviews with local nutrition experts.

3.3.1.2 Commercially produced foods for general consumption commonly fed to children under the age of two years:

A strategically selected list of commercially produced foods for general consumption commonly fed to children under the age of two years was identified through gathering country literature on infant feeding and obtaining expert opinions.

Commercially produced foods for general consumption commonly fed to children under the age of two years were selected according to eight product sub-categories - soda/carbonated beverages, biscuits/cookies, chips/crisps, cakes/sponge cakes, candy/sweets/chocolates, yoghurt, other sweetened beverages and country specific products. An effort was made to determine which brands and products from these product sub-categories are commonly fed to children under two years of age.

The following strategies were used to identify products/brands in each category: literature searches were conducted to obtain country DHS/food consumption survey data and any local or national studies that documented diets of children under two years of age or documenting consumption of 'snack foods' or commercially produced foods for general consumption; consultation with in-country stakeholders / researchers / market researchers / health workers / parents of children under two years of age / the country ARCH Project Advisory Committee; adults and children in small corner stores or at health facilities were observed on an ad hoc basis in order to identify which specific brands of products are commonly purchased.

The final list of products was selected by consultation and consensus between the ARCH Project global research team. Where possible one locally produced and one imported product per product sub-category was selected.

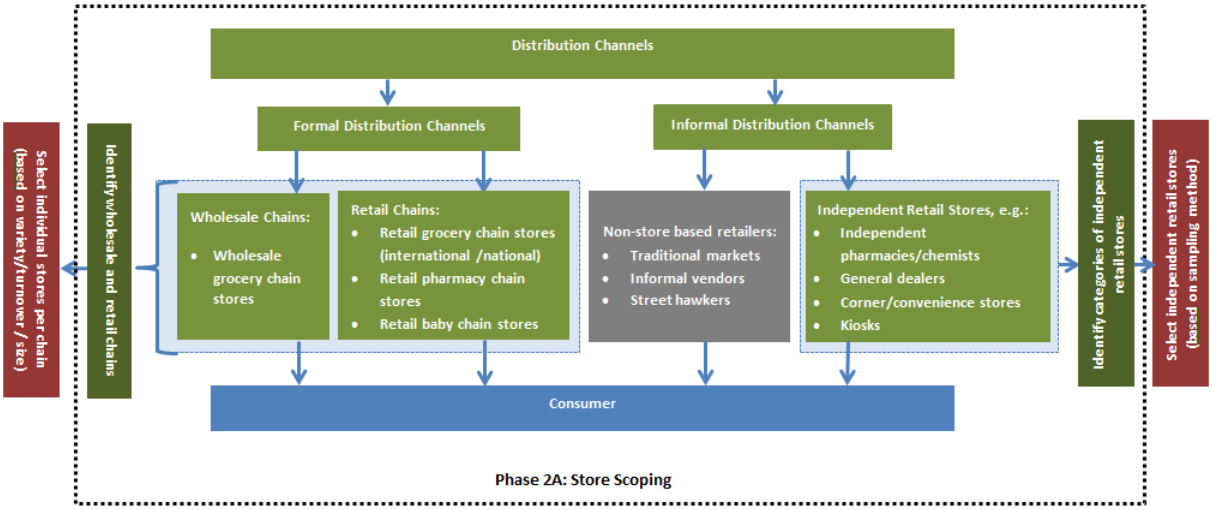
Only the specific brands of products selected were sought out and purchased from the same stores selected for the purchasing of the commercially produced complementary foods.

3.3.2 Phase 2A: Store selection

Two processes were followed for store selection, with the aim to obtain as many commercially produced complementary foods available in the country as possible. The commercially produced foods for general consumption commonly fed to children under the age of two years were also purchased from the same stores.

1. Large and generally formal stores (supermarket or independent grocery stores) were strategically selected based on HKI in country staff knowledge that they potentially stocked the greatest variety of commercially produced complementary food products.
2. Smaller and less formal stores (independent corner or convenience stores or independent pharmacies) were selected using a random sampling method. It was decided that these stores were very similar in structure with no means to differentiate certain stores as selling a wider range of commercially produced complementary foods. Thus for these stores, a random sampling was deemed to be more appropriate than purposive sampling. See Appendix A for the informal store sampling methods.

Figure 3-1 Distribution channels through which foods for infants and young children may be sold to be identified during Phase 2A: Store scoping.



A total of 31 stores were included in the study. Nine larger stores were purposively sampled to ensure enough relevant products would be available (four national retail grocery chain stores and five medium independent retail grocery stores) and 22 smaller stores were randomly sampled (17 corner stores and five pharmacies). The purchase of all 62 commercially produced complementary foods (n=22) and foods not marketed to but commonly fed to children under two years of age included in the study (n=40) took place during June and July of 2013. It is interesting to note that the smaller stores did not sell any different products from those sold in the larger stores.

3.3.3 Phase 2B: Product purchasing (data collection)

One of each available commercially produced complementary food was purchased from the selected stores according to specified selection criteria (see Table 3-1). Only one flavor and size variant of each product was purchased from the first store visited. The remaining stores were cross-checked for products. Products were identified as different if they differed according to any of the following variables: brand name, sub-brand name, descriptive name, age category and if they were available in a single/double serving size (versus multiple servings). In addition any other commercially produced complementary foods that were found in the stores during the visits, but were not on the original scoping list, were purchased. For the selected commercially produced foods for general consumption commonly fed to children under the age of two years, only the specific brands of products identified during the product scoping were sought out and purchased. Any additional products that had a point-of sale promotion that appeared to target children were also purchased. All products purchased were recorded on a data collection form (see Appendix B).

Table 3-1 Inclusion and exclusion criteria of products for the ARCH Project labeling study.

INCLUSION CRITERIA	EXCLUSION CRITERIA
Commercially produced complementary foods	
• Commercially produced food/beverage products found in the non-perishable section of the store designated for infant and young child foods AND in the refrigerated or frozen sections of the store, that are marketed as suitable* for feeding children under the age of two years e.g.: o Cereal/porridge; o Homogenized/pureed food; o Snacks/finger food; o Gravy/soup; o Fresh/frozen food; o Tea/juice/water; o Milkshake powder; o Lipid nutrient supplements (LNS); o Micronutrient powders (MNP).	• Breast-milk substitutes • Products whose labels state that they are intended only for pregnant women, mothers or children older than two years. • Meal replacements, nutritional supplements (except for complementary food supplements e.g. LNS) and micronutrient supplements (except for MNPs). • Products not available to customers through retail/wholesale outlets (e.g. products only distributed through government/humanitarian programs or products only available for purchase online).
Commercially produced foods for general consumption commonly fed to children under the age of two years	
• Branded products appearing on the *Master List* of commercially produced foods for general consumption commonly fed to children under the age of two years created during 'Phase 1: Scoping of the breast-milk substitutes, commercially produced complementary foods and commercially produced foods for general consumption commonly fed to children under the age of two years market'. These are foods commonly fed to, but not marketed as suitable* for, children under the age of two years e.g. o soda/carbonated beverages, o bottled water, o condensed milk/evaporated milk, o chocolate/malt beverages, o other sweet beverages (e.g. 100% juice/juice drinks, probiotic drinks), o biscuits/cookies, o savory snacks (chips, crisps), o sweet snacks (cakes/doughnuts and candy/sweets/chocolate), o processed cereals (e.g. maize meal), o breakfast cereals, o instant noodles, o peanut butter, o yoghurt, and o other commonly consumed desserts	• All other products.

*Marketed as suitable: Labels indicate that the product is intended for children under the age of two years by (a) making use of the words baby/babe/infant/toddler/young child in the context of a child's age e.g. baby food (food for babies), not the size/maturity of the product e.g. baby potato (young potato), (b) by recommending an age of introduction less than two years on the label, or (c) using an image of a child appearing younger than two years of age or an image or text of infant feeding (which could include a bottle).

3.3.4 Phase 3: Cross-checking of purchased versus scoped products

After the products were purchased from selected stores, they were compared to the products on the master list, and the percentage of purchased versus scoped products was calculated. If less than 80% of scoped products were purchased, then further purchases were required to reach the target of 80% based on the methodology used in the study of Sweet et al. (2012a; 2012b). In Nepal there was no need to conduct Phase 3 as over 80% of the scoped products were purchased in Phase 2B.

Sixteen of the commercially produced complementary foods that were purchased were identified during the scoping phase of the research. Six additional products were identified during the product purchasing phase. The final analysis therefore included 22 products

determined to be commercially produced complementary foods.

Twenty-eight commercially produced foods for general consumption commonly fed to children under the age of two years that represented a range of product categories (e.g. biscuits/cookies, cakes/sponge cake, sweets/candy/chocolate, chips/crisps, yoghurt, soda/carbonated beverages, other sweetened beverages and other country specific products) were selected during the scoping phase and were subsequently purchased during the purchasing phase of the research. Twelve additional products were identified during the product purchasing phase. Eight of these additional products were added due to having a point-of sale promotion that appeared to target children at the time of product purchasing. One product was added because it was initially incorrectly classified as a commercially produced complementary food for having the word 'baby' on the product label, which could imply that the product can be used for infant feeding. After analysis and discussion of the product label, it was determined that in this instance the term 'baby' referred to the size of the actual food products inside the packaging, and therefore the definition used in the study for complementary foods was amended to include "making use of the words baby/babe/infant/toddler/young child in the context of a child's age, not the size/maturity of the product e.g. baby potato (young potato)". This product was therefore excluded from being a commercially produced complementary food.

A further three products were added to provide examples of locally produced products. The final analysis included 40 commercially produced foods for general consumption commonly fed to children under the age of two years.

3.4 Ethical considerations

In Nepal, due to the fact that human subjects were not used in the study, it was not necessary to obtain formal ethical approval for this research (NHRC, 2011). As the researchers were required to enter stores and purchase available products, it was deemed necessary to explain the research and request permission to collect data from the store manager (see Appendix C for the letter of request to store managers).

3.5 Data extraction and data entry

Data extraction, data entry and analysis were conducted by a single team in South Africa to ensure consistency across all four countries.

Following product purchasing, all the product labels were photographed or scanned and uploaded to a central digital folder by HKI country staff. As Nepali food labeling regulations require all food products to be in Nepali and/or English, all labels that were in Nepali and not English were translated by a professional translator appointed by the HKI country office. All of the translated labels were back-translated to check the quality of the translation. Seven (32%) commercially produced complementary foods and two (5%) commercially produced foods for general consumption commonly fed to children under the age of two years had some or all of the information translated. Of these, three of the commercially produced complementary foods only needed sections of the label's insert to be translated, while four required outer labels sections to be translated. If a label contained text in neither English nor Nepali only the images on the label were assessed. This was done in order to analyze the labels as it was assumed a Nepali mother would if there was no text in Nepali or English. No commercially produced complementary foods and only one commercially produced food for general consumption commonly fed to children under the age of two years was assessed based on its images only.

One trained researcher carried out data extraction, where all predetermined categories and themes of the product label were entered into a Microsoft Excel database. Data extraction quality was assessed by a second trained researcher randomly selecting and cross-assessing 10% of the data extracted. Any disagreements regarding the information extracted were resolved by consensus and where consensus could not be reached (0.65% of responses), a third researcher made the final decision in consultation with the first and second researchers.

3.6 Labeling practices checklists

The cleaned database was used to complete one of two labeling practices checklists which was completed independently by two researchers and the results were compared and any discrepancies resolved by consensus and where consensus could not be reached, a third researcher made the final decision in consultation with the first and second researchers.

The commercially produced complementary food labeling practices checklist (Appendix D) was based on the checklist used by Sweet, et al. (2012), which was constructed using the guidance provided in the document *Using the Code of Marketing of Breast-milk Substitutes to Guide the Marketing of Complementary Foods to Protect Optimal Infant Feeding Practices* (Quinn, et al., 2010) and relevant WHA Resolutions, that has been modified to incorporate the recommendations for improvement made by Sweet, et al. (2012).

Since there is no formal guidance for the marketing of this group of products, the structure of the commercially produced foods for general consumption commonly fed to children under the age of two years labeling practices checklist (see Appendix E) was based on the commercially produced complementary foods checklist and adapted to include the principles of international guidance available on the marketing of foods and beverages to children (WHO, 2004; CI, 2008; WHO, 2010; IASO, 2012). Table 3-2 below, gives an outline of the themes covered in the checklists.

Table 3-2 Summary of themes covered by the checklist questions

Commercially produced complementary foods (CPCF)	**Commercially produced foods for general consumption commonly fed to children under the age of two years (CPF)**
• Language • Inserts • Age related recommendations • Feeding instructions and phrases • Feeding practices messages • Preparation and use instructions • Consistency • Portion size and daily ration • Storage instructions • Warnings • Images • Cross-promotion • Nutrition and health claims • Mandatory label information	• Language • Age related recommendations • Preparation and use instructions • Consistency • Portion size and daily ration • Storage instructions • Warnings • Images • Cross-promotion • Nutrition and health claims • Mandatory label information • Various labeling practices that could imply suitability to children (e.g. images of cartoons or toys, shapes that could appeal to children, jokes or stories, etc.)

In order to compare the labels of products included in this study to the relevant Nepali national legislation, it was determined whether additional country-specific questions needed to be added to the checklists. The checklist question on languages was adapted to incorporate the Nepali *Food Regulation*, 2027 (1970) language requirements, which prescribe that labels need to contain text in

Nepali and/or English (Government of Nepal, 1970). These are incorporated into Question 1 of the commercially produced complementary food labeling practices checklist (see Table 4-4) and Question 32 of the commercially produced foods for general consumption commonly fed to children under the age of two years labeling practices checklist (see Table 5-5). With regard to product-specific questions, for commercially produced complementary foods, there were no additional questions that needed to be added to the checklist. For commercially produced foods for general consumption commonly fed to children under the age of two years, an additional question would have needed to be added for condensed milk products. However, according to the methodology followed to select this group of products, no condensed milks were included in the study.

3.7 Data analysis

Once the labeling practices checklists were completed, product names were replaced with a product code created by a random number generator, product identifiers such as manufacturer/distributor name, brand and sub-brand name, descriptive name and variant were blinded and the order of the products randomly shuffled in order to 'blind' the completed database. This was done in order to reduce bias.

The categorized descriptive data was imported into statistical software (STATA version 10™) and simple frequencies calculated for each possible category under each field in the database.

The frequencies, together with some of the original descriptive data, were used to present:

- A record of labeling practices for current commercially produced complementary foods / commercially produced foods for general consumption commonly fed to children under the age of two years in Kathmandu Valley;
- A discussion on labeling trends of interest for commercially produced complementary foods / commercially produced foods for general consumption commonly fed to children under the age of two years; and
- Examples and prevalence of:
  - Inappropriate labeling practices;
  - Practices that may be inappropriate but were not detected by the labeling practices checklist; and
  - Practices which were particularly commendable.

In addition, the nutrient composition of the foods, where it was provided on the label, was captured. Where possible, the content of macro- and micro-nutrients per 100g and per 100kcal, and the contribution to the daily DRI/RNI of the 100kcal portion was determined (see Appendix G). No further analysis of the nutrient composition could be undertaken without a detailed assessment of the Nepali food labelling regulation requirements specifically in terms of declaration requirements (e.g. provision of total sugar) and associated definitions (e.g. what constitutes total sugar).

This assessment was outside the scope of the current research but could be undertaken as future research using the ARCH Project database.

4 RESULTS AND DISCUSSION OF COMMERCIALLY PRODUCED COMPLEMENTARY FOOD LABELS

4.1 Description of commercially produced complementary foods products

The characteristics of the 22 commercially produced complementary foods included in the study are shown in Table 4-1. All products in the sample were shelf stable and none were either fresh or frozen. Only two sub-categories of products were found in the stores where data collection took place: cereal/porridge (95%) and pureed food (5%). None of the following sub-categories of products were found: snacks/finger food, milkshake powder, gravy/soup, multiple micronutrient powder/lipid nutrient supplement.

Fifty-five percent of the products were imported from India, which has very strict regulations pertaining to foods for infants and young children, and 36% were locally produced (Table 4-2). The products were manufactured by 12 different companies (Figure 4-1) and represented 13 different brands (Figure 4-2).

As described in the methodology section of this report the database was blinded so results are not given by manufacturer.

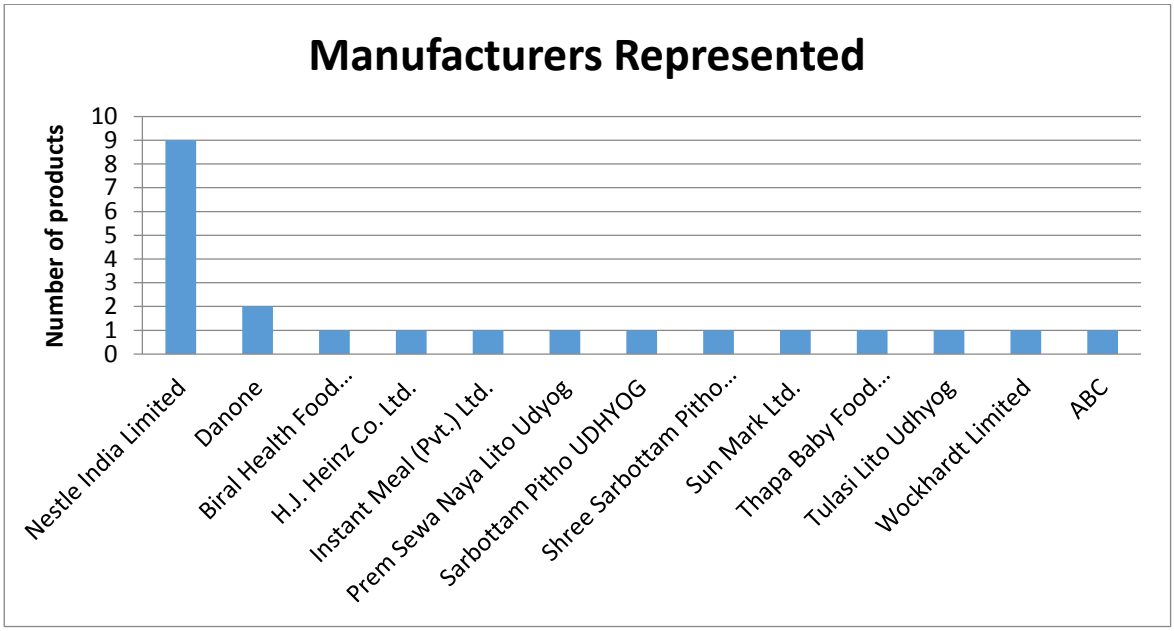
Table 4-1 Characteristics of commercially produced complementary food products in Nepal (n=22).

Product characteristics	Number of products	Percentage of products
Product origin:		
Locally manufactured products	8	36
Imported products	14	64
Product category:		
Cereal/porridge	21	95
Pureed food	1	5
Storage:		
Shelf stable	22	100

Table 4-2 Country of origin of commercially produced complementary foods in Nepal (n=22).

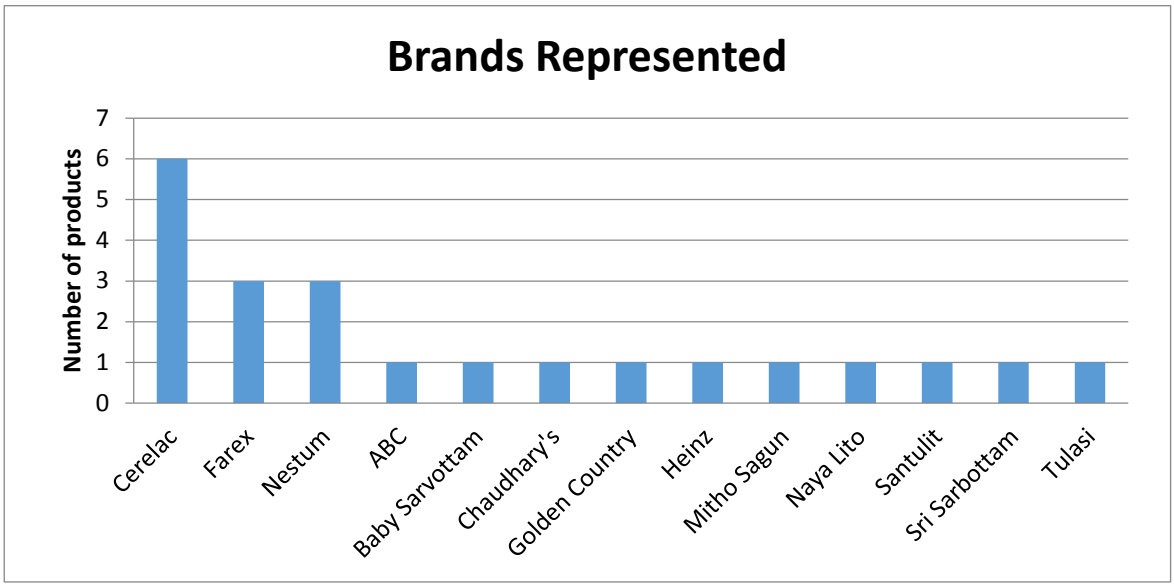
Country of origin	Number of products	Percentage of products
India	12	55
Nepal	8	36
England	1	5
EU/ UK	1	5

Figure 4-1 Manufacturers of commercially produced complementary foods represented in Nepal (n=12).



Danone purchased the Farex brand from Wockhardt in 2012 (Economic Times, 2012); one cereal product (Farex) was labeled as Wockhardt, and the other two Farex products were labeled as Nutricia International Private Ltd (owned by Danone).

Figure 4-2 Brands of commercially produced complementary foods represented in Nepal (n=22).



The cost of the product was captured at the first store where the product was found and purchased. Therefore, the costs shown in Table 4-3 are not average costs, but rather represent a single price paid for the product. Gathering of price information of the products across the range of outlets where they were available was not part of the scope of this study. Table 4-3 provides information on the cost of the products per 100g and per serving size. The cereal product serving size was based on 25g, which is considered the serving size that should provide approximately 100kcal or half the daily energy requirement from complementary food of the breastfed child 6 – 8 months of age. The serving size for the pureed product was 128g which provides 106kcal which is approximately half the daily energy requirement from complementary food of the breastfed child 6 - 8 months of age.

Table 4-3 Costs of commercially produced complementary foods in Nepal per unit (g) and mean cost per serving by product category (n=22) presented in two currencies [Nepalese Rupees (NPR) and United States Dollar (USD)].

Product category	Mean cost per 100g (Lowest cost – Highest cost)	Mean cost/serving (Lowest cost - Highest cost)
CEREAL/PORRIDGE		
All products (n=21)		
NPR	69.5 (19 – 150)	17.37[a] (4.75 – 37.5)
USD	0.72 (0.20 – 1.56)	0.18 (0.05 – 0.39)
Imported products (n=13)		
NPR	97.23 (65 – 150)	24.30 (16.25 – 37.5)
USD	1.01 (0.68 – 1.56)	0.13 (0.05 – 0.23)
Locally manufactured products (n=8)		
NPR	24.45 (19 – 37.5)	6.11 (4.75 – 9.38)
USD	0.25 (0.20 – 0.39)	0.06 (0.05 – 0.10)
PUREED FOOD		
All products (n=1)		
NPR	121.1	155[b]
USD	1.26	1.61
Imported products (n=1)		
NPR	121.1	155
USD	1.26	1.61
Locally manufactured products (n=0)		
NPR	0	-
USD	0	-

[a] Per 25g portion which is based on a serving calculated to provide 100 kcal which is approximately half the daily energy requirement from complementary food of the breastfed child 6-8 months of age.

[b] Per 128g portion which provided 106 kcal which is approximately half the daily energy requirement from complementary food of the breastfed child 6-8 months of age.

In addition, a calculation was undertaken to determine the total daily cost of a product based on the suggested daily ration and serving size provided by the manufacturer, as opposed to the theoretical serving size of 25g or 128g used above. Due to the limited information provided by the manufacturers, this calculation could only be computed for 14 cereal products. The mean cost of the manufacturer's suggested daily ration for cereal products was NPR 64.38 (21.15 – 123.75) [USD 0.66 (0.21 – 1.29)].

4.2 Summary of answers to commercially produced complementary foods checklist questions and data generated by the labels database

The results of the labeling practices checklist Table 4-4 together with data generated by the labels database, which documents current complementary food labeling practices in Nepal, are presented here.

Table 4-4 Nepal checklist results: Commercially produced complementary food labeling practices (n=22).

	Checklist of labeling practices	Potential answers	Number of labels	Percentage of labels	Percentage of labels (excl. NA)[a]

	Checklist of labeling practices	Potential answers	Number of labels	Percentage of labels	Percentage of labels (excl. NA)[a]
1	Is the product label written in the appropriate language(s) of the country in which the product is sold?	Yes	22	100	
		Partial[b]	0		
		No	0		
2	Does the product insert contain any required label information that is NOT present on the label?	Yes	1	4.5	25
		No	3	13.6	75
		NA[a]	18	81.8	
3	Does the product label specify a recommended age of introduction that is less than 6 months of age?	Yes	3	14	
		No	19	86	
		NA[a]	0		
4	Does the product label give instructions indicating how to feed the product to infants younger than six months?	Yes	2	9	
		No	20	91	
5	Does the product label include phrases such as 'from the start'; 'for the whole family' or 'first stage'?	Yes	0	0	
		Partial[b]	5	23	
		No	17	77	
6	Does the product label include the following messages:				
6.1	An appropriate/recommended age for use of the product that is six months (180 days) or more.	Yes	19	86	
		No	3	14	
6.2.1	The importance of exclusive breastfeeding for the first six months of life;	Yes	6	27	
		No	4	18	
		Partial[b]	12	55	
6.2.2	Is a recommendation regarding exclusive breastfeeding for the first six months of life weakened[c] by a message regarding feeding practices for infants and young children?	Yes	0		
		No	18	82	100
		NA[a]	4	18	
6.3.1	The importance of the addition of complementary foods from six months of age with continued breastfeeding up to two years or beyond;	Yes	0		
		Partial[b]	14	64	
		No	8	36	
6.3.2	Is a recommendation regarding complementary feeding weakened by a message regarding feeding practices for infants and young children?	Yes	12	55	71
		No	5	23	29
		NA[a]	5	23	
6.4	Instructions for safe and appropriate preparation and use.	Yes	22	100	
		Partial[b]	0		
		No	0		
6.5	A recommendation to feed the product with a spoon. NOTE: Select 'Not applicable' for Tea / Juice / Water / Milkshake powder AND Snacks / Finger Foods (excluding rusks that are used to make porridges)	Yes	20	91	
		Partial[b]	2	9	
		No	0		
		NA[a]	0		
6.6	A proposed daily ration/serving or recommended number of servings per day and serving?	Yes	14	64	
		Partial[b]	2	9	
		No	6	27	
6.7	Instructions for safe and appropriate storage?	Yes	22	100	
		No	0		
6.8	Ingredients list?	Yes	21	95	
		No	1	5	
6.9	The nutrition composition/analysis of the product?	Yes	21	95	
		No	1	5	
6.10	Batch number?	Yes	20	91	
		No	2	9	
6.11	Best before date?	Yes	22	100	
		No	0		

	Checklist of labeling practices	Potential answers	Number of labels	Percentage of labels	Percentage of labels (excl. NA)[a]
7	Does the product label recommend feeding the product in a bottle?	Yes	0		
		No	22	100	
8	Does the product label show an image of a feeding bottle?	Yes	0		
		No	22	100	
9	Does the product label recommend feeding the product in a soft or semi-soft form? NOTE: Select 'Not Applicable' for all categories of products except Cereal/Porridge. Applies to rusks that are used to make porridges.	Yes	0		
		Partial[b]	2	9	10
		No	19	86	90
		NA[a]	1	5	
10	Does the product label recommend feeding the product in a liquid form? NOTE: Select 'Not Applicable' for the puree	Yes	0	0	0
		Partial[b]	1	5	5
		No	20	91	91
		NA[a]	1	5	
11	Does the daily ration (or a recommended serving size combined with a recommended frequency of feeds per day) included on the product label exceed the recommended energy intake from complementary foods for a breastfed child provided below? Insufficient information refers to product labels with no daily ration or serving size provided.				
11.1	6 - 8.9 months : 837 kJ/day (200 Kcal/day)	Yes	10	46	56
		No	0		
		Insufficient Information	8	36	44
		NA[a]	4	18	
11.2	9 - 11.9 months : 1,255 kJ/day (300 Kcal/day)	Yes	13	59	62
		No	0		
		Insufficient Information	8	36	38
		NA[a]	1	5	
11.3	12 - 23.9 months : 2301 kJ/day (550 Kcal)	Yes	4	18	
		No	10	46	
		Insufficient Information	8	36	
		NA[a]	0		
12	Does the product label include a stipulated warning? NOTE: A stipulated warning includes a warning stating the health hazards/potential risks of inappropriate preparation, use and storage, or advising against certain (preparation, use or storage) practices.	Yes	15	68	
		No	7	32	
13	Does the product label include images of babies appearing to be older than six months of age?	Yes	2	9	40
		Unclear	1	5	20
		No	2	9	40
		NA[a]	17	77	
13.1	Does the product label include an image/ images of baby animals displaying physical or developmental milestones commonly associated with infants younger than six months of age?	Yes	0		0
		No	0		
		NA[a]	22	100	
14	In the case of manufacturers that produce both breast-milk substitutes and complementary foods, is the product labeled in a way that also promotes the company's infant or follow up formula by using similar: 1. Color schemes or designs 2. Names 3. Slogans, mascots or other symbols	Yes	9	41	75
		No	3	14	25
		Does not produce breast-milk substitutes	10	46	

	Checklist of labeling practices	Potential answers	Number of labels	Percentage of labels	Percentage of labels (excl. NA)[a]
	as used for their infant formula or follow up formula brands?				
14.1	In the case of manufacturers that produce both breast-milk substitutes and complementary foods, is the product labeled in a way that also promotes the company's breast-milk substitutes (e.g. infant or follow-up formula) by including pack-shots of such products on the label and/or directly referring to the company's IF/FUF/GUM? (e.g. to prepare the cereal with the manufacturers FUF)	Yes	0		
		No	12	55	100
		Does not produce breast-milk substitutes	10	46	
14.2	In the case of manufacturers that produce both breast-milk substitutes and complementary foods, is there an invitation on the label to make contact (direct or indirect) with the company's marketing personnel?	Yes	0		
		No	12	55	100
		NA[a]	10	46	
15	Does the product label make any nutrient content claims?	Yes	20	91	
		No	2	9	
16	Does the product label make any nutrient comparative claims?	Yes	2	9	
		No	20	91	
17	Does the product label make any nutrient function/other function claims?	Yes	21	96	
		No	1	46	
18	Does the product label make any reduction of disease risk claims?	Yes	5	23	
		No	17	77	

[a] Refers to the number of products which were excluded from a particular checklist question since the label information / product information was not relevant to that question. Therefore read both percentage columns; percentage column 1 contains all product labels in the sample; percentage column 2 contains only those product labels which were appropriate / applicable to the respective question. For example, 4 product labels were excluded from the question on daily ration exceeding the recommended energy intake for 6 – 8.9 months; since those 4 product labels were not marketed to infants of this age group and as such the energy content information was not relevant to answering this question.

[b] Partial responses are indicated when a label meets one or some, but not all, possible criteria for choosing the answer (i.e. includes one or two out of three components of an answer, or includes one of two components of an answer).

[c] In some cases, the label did not state a feeding message for the preceding question but ambiguous messages regarding either breastfeeding or complementary feeding were presented on the labels, for example: One product did not refer to breastfeeding or complementary feeding but the manufacturer did expand on a complementary feeding message: "*Each baby growing at his/her own pace ask your doctor some advice when to start giving him or her the product*." Another example: "*This product cannot be used as a breast milk substitute during the first 4 months of life*". However this particular product does not previously refer to exclusive breastfeeding anywhere else on the label

Of the 22 CPCF labels assessed, none were compliant with all of the labeling practices checklist requirements.

4.3 Labeling practices according to the STAG five criteria for inappropriate promotion

4.3.1 STAG 1: Promotion is inappropriate if it undermines recommended breastfeeding practices.

4.3.1.1 STAG 1a: Products should not be promoted as suitable before 6 months

There are numerous ways in which a product label can imply suitability for before six months. These include a recommended age of introduction that is less than six months; the provision of feeding instructions for less than six months; phrases for use that imply being suitable for less than six months and; images of children displaying developmental milestones that are reached before six months.

4.3.1.1.1 Age related recommendations, feeding instructions and phrases

The checklist (Question 3 and 6.1 respectively) shown in Table 4-4 revealed that the majority, 86% of labels (n=19) specified an appropriate age of introduction of six months or more. Fourteen percent of the labels recommended an age of introduction of less than six months. One of these specified the age of introduction as being 4 to 36 months and two stated an introduction age of five months onwards.

Two (9%) labels provided instructions on how to feed the product to infants younger than six months (Question 4, Table 4-4). For example*: "Start feeding with 1 teaspoonful from 5 months onwards and increase the quantity as the baby is able to digest.* Five (22.7%) product labels used a phrase that may indicate that the product is suitable for use for infants younger than six months ('Stage 1' was used on four labels, 'Gentle first food' on one label, and daily recommended dietary allowances for infants 0-6 months of age were provided in a table on one label) although a recommended age of introduction of six months was provided in all cases.

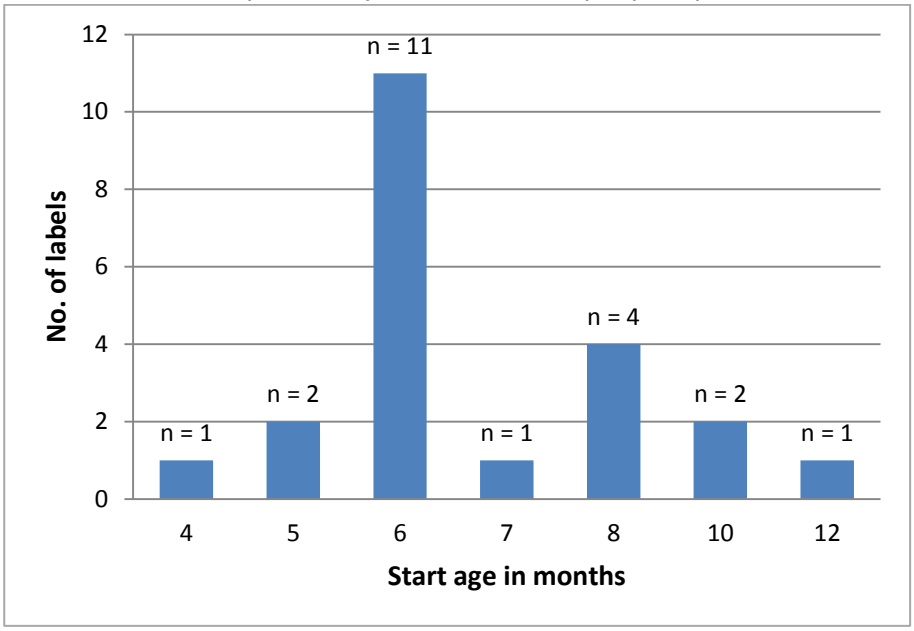
Table 4-5 and Figure 4-3 depict the exact wording of the age of introduction recommended by the manufacturers for the entire sample. The majority of labels (46%) include the term '6 months' (including 6 months+; from 6 months; after 6 months; at 6 months of age; infants above 6 months). Although one label contained an age of introduction from 6 months, it also showed a Recommended Daily Allowance (RDA) table including the 0-6 months age category, which could be confusing to a mother although it was not categorised in this study as a feeding instruction for less than 6 months.

Table 4-5 Wording used for the recommended age of introduction on commercially produced complementary food labels in Nepal (n=22).

Age of introduction	Number of labels	Percentage of labels
From 4 to 36 months	1	5
After 5 months; from 5 months onwards	2	9
6 months[a]	10	46
After 6 to 24 months	1	5
From 7 to 24 months	1	5
8 months +	3	14
From 8 to 24 months	1	5
10 months +	1	5
From 10 to 24 months	1	5
From 12 months	1	5

[a] Includes: 6 months; 6 months+; from 6 months; after 6 months; at 6 months of age; infants above 6 months

Figure 4-3 Recommended age of introduction given in months, on commercially produced complementary food labels in Nepal (n=22).



Further assessment of stage descriptors which are not covered by the checklist questions (see table 4-6), shows that 7 (33%) labels contained wording which implied suitability before six months of age, including wording such as "*Stage 1*", "*Baby*", "*For baby, youth, elderly and the sick*" and "*Specially for Infant to Old*". Although 5 of these 7 labels stated "*Stage 1*" they also included a suitable age recommendation stating from 6 months. One product stated "*Baby*" and included an age recommendation from 4 months and one product stated "*For baby, youth, elderly and sick*" and included an age recommendation from 5 months.

Table 4-6 Stage age descriptors which are not written in months or years on commercially produced complementary food labels in Nepal (n=18).

Stage descriptor	Number of labels	Percentage of labels
Stage 1	4	18
Stage 2	4	18
Infants	3	14
Stage 3	3	14
Baby	1	5
For Baby, Youth, Elderly, and the sick	1	5
Specially for Infant to Old	1	5
Stage 4	1	5

4.3.1.1.2 Images: Developmental milestones

Of the 5 product labels that included an image of an infant or young child, two showed an image of an infant displaying a developmental milestone commonly associated with infants older than six months of age (Question 13, Table 4-4 and Figure 4-4, image A). Two labels had an image of a young child displaying a developmental milestone commonly associated with infants younger than 6 months of age, namely 'sitting with support' (see Figure 4-7, image B).

A further animated image of a young child depicted a developmental stage that could not be determined as being applicable to a child under or over six months of age (see Figure 4-7, image C). None of the labels included images of baby animals displaying physical or

developmental milestones commonly associated with infants younger than six months of age (Question 13.3, Table 4-4).

Two (40%) of the images of infants and young children displayed the physical and developmental milestone of 'sitting without support', this and other milestones are shown in Table 4-7. More than one milestone may be displayed by each child.

Table 4-7 Physical or developmental milestones displayed by images of infants/young children used on commercially produced complementary food labels in Nepal (n=5).

Age of milestones reached	Physical or developmental milestone[a]	Number of labels	Percentage of labels
Infant 0-6 months	Sitting without support	2	40
	Sitting with support	1	20
After 6 months	More than 2 teeth	1	20
	Standing alone	1	20
	Walking alone	1	20
	Holding objects such as a spoon/cup and self-feeding	1	20
Unclear	Other (young child half crawling, half sitting)	1	20

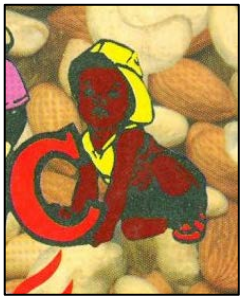
[a]Sweet, et al, 2012b

Figure 4-4 Images used on commercially produced complementary food labels in Nepal displaying developmental stages.

Milestones achieved after 6 months: Milestones achieved before 6 months: Milestones that are unclear:

A

B



C

4.3.1.2 STAG 1b: Products should not be promoted to be given by bottles or using teats.

Products can either promote that they could or should be given in a bottle or with use of a teat by providing instructions on how to prepare the product in a bottle (see also, section 4.3.5.2.3 Preparation and use); providing instructions to prepare the product in a liquid consistency; or containing an image of a feeding bottle on the product label.

4.3.1.2.1 Consistency

Of the applicable products (cereals and rusks if made into a porridge), 91% of the labels included the recommendation, and 9% implied (by use of an image of a spoon) the recommendation to feed the product with a spoon (Question 6.5, Table 4-4). Furthermore, of the applicable products (21 cereals in total), none of the labels qualified as a 'yes' and 9.5% qualified as 'partial' compliance to the recommendation to state that the product should be fed in a soft or semi-soft form (Question 9, Table 4-4). None of non-liquid products recommended that they be fed in a liquid form. None of the products recommended feeding the product from a bottle (Question 7, Table 4-4), or showed an image of a feeding bottle on the label (Question 8, Table 4-4).

4.3.1.3 STAG 1c: Products should not be portrayed as equivalent or superior to breast milk.

Infant and young child feeding practices messages may imply that the complementary food is equivalent or superior to breast milk. An example is the text "*Gentle first food. The first introduction to solid food that is easy to digest and gentle on baby's stomach."* Such statements are often not directly stating that the product is equivalent or superior to breast milk and determining if this is the case is generally subjective. See Table 4-9 for a full list of examples of recommended feeding practices.

4.3.1.4 STAG 1d: Products should not be promoted as a replacement for breast milk.

The use of the word 'weaning' generally implies the cessation of breastfeeding. Weaning if translated to Nepali means 'getting the baby off the breast', however it would appear that '*this does not necessarily mean at 6 months, but around the age of 2 or 3 years when the baby is ready to stop breastfeeding*'. This is however anecdotal from personal communication with the HKI country staff and more country specific research should be undertaken as to the generally accepted age that the use of the term weaning implies, if the term is permitted on labels so as to ensure that it does not undermine breastfeeding recommendations.

The following are examples of feeding practice recommendations that make use of the word 'weaning':

- *Suitable for weaning, for extra stamina and for use in sickness.*
- *[Product name] is a pre-cooked, easy-to-digest weaning cereal packed with essential vitamins and minerals that are important for your baby's development.*
- *Breastfeeding should continue for as long as possible after introduction of weaning foods.*

This highlights the need for specific guidance on terminology that is considered to be inappropriate as it may promote the product as a replacement for breast milk.

Product labels could also imply that they are to be used as a replacement for breast milk if there is a recommendation to feed in a bottle or as a liquid. This practice has been covered under sub-section 4.3.1.2.

4.3.1.5 STAG 1e: Products should not be promoted using brands/labels/logos that are the same/similar to those used for breast-milk substitutes

4.3.1.5.1 Cross-promotion

Of the product labels examined 55% (n=12) of the companies/ manufacturers also sold infant/ follow up formula/ breast-milk substitutes (Table 4-8). The checklist reflects that 75% of the product labels presented a resemblance to the same manufacturer's breast-milk substitute through the product color schemes/ designs, names and/or slogans/ mascots/ other symbols (Question 14, Table 4-4).

None of the products were labeled in a way that also promoted the manufacturers breast-milk substitutes by including pack-shots of these products on the label and/or directly referring to the company's infant formula/ follow-up formula/ growing-up milks in the preparation instructions (Question 14.1, Table 4-4).

Similarities between commercially produced complementary foods and breast-milk substitutes were noted in that nine (41%) of the labels had similar colour schemes and designs and 3 (33%) of the nine labels also had a similar name to the infant/ follow up formula/ breast milk-substitutes manufactured by the same company (data not shown). See Figure 4-6.

Table 4-8 Similarities between the labels of commercially produced complementary foods and breast-milk substitutes manufactured by the same companies in Nepal (n=12).

Similarities	Number of labels	Percentage of labels
Similar colour schemes / designs	9	75
Similar names	3	25
Similar slogans / mascots / symbols	0	0

Figure 4-5 Examples of cross-promotion between breast-milk substitutes and commercially produced complementary foods in Nepal.

Example of a commercially produced complementary food displaying a similar design to that of the breast-milk substitute produced by the same manufacturer: (White text boxes are used to cover price stickers in order to blind store names.)

Infant formula Complementary food

Example of a commercially produced complementary food displaying both a similar color scheme/ design and a similar name to the breast-milk substitute produced by the same manufacturer:

Infant formula Complementary food

4.3.1.6 STAG 1f: Daily ration size should not exceed the amount of energy needed from complementary foods by breastfed children.

4.3.1.6.1 Daily ration

Sixty-four percent of the labels provided a daily ration or serving size and a further 9% of the labels provided enough information to calculate the total daily ration (Question 6.6, Table 4-4). Twenty-three percent of all the labels did not provide sufficient information to determine if a daily ration of the product exceeded the global recommended energy intake

from complementary foods for a breastfed child.

In the majority of products for which calculations could be made, a single serving or daily ration exceeded the recommended daily energy intake for complementary foods of a breastfed child. The single serving size or daily ration of 56% of the products for children 6 to 8.9 months exceeded the recommended daily energy intake for complementary foods for a breastfed child. This figure increased to 62% for products for the older age category of 9 to 11.9 months and decreased to 18% for products for the 12 to 23.9 months age group (Questions 11.1, 11.2 and 11.3 respectively, Table 4-4).

4.3.1.7 **Suggested addition to STAG criterion 1.**

4.3.1.7.1 Infant and young child feeding messages

Messages or recommendations regarding feeding practices for infants and young children were provided on 18 (82%) labels, including messages on breastfeeding and complementary feeding, and these messages have been categorised and examples provided in Table 4-9. It was not always easy to determine if the feeding messages were appropriate or not and examples are given in Figure 4-7.

Table 4-9 Messages/recommendations regarding feeding practices for infants and young children used on commercially produced complementary food labels in Nepal (n=18).

Categories of messages regarding feeding practices for infants and young children	Number of labels	Percentage of labels	Example text from labels
Breastfeeding / Milk feed messages:			
Breastfeeding is best for your baby	15	83	*Important notice: Mother's milk is best for your baby.*
Continue while introducing solids	8	44	*Breastfeeding should continue for as long as possible after introduction of weaning foods.*
Recommendation: WHO	6	33	*The World Health Organization recommends exclusive breastfeeding for 6 months. [Manufacturer's name] supports this recommendation.*
Should continue as long as possible	6	33	*Breastfeeding should continue for as long as possible after introduction of weaning foods*.
Breast milk / infant formula is insufficient from 6 months	5	28	*[Product name] is a complementary food for babies after 6 months when breast milk can no longer totally cover the baby's growing nutritional requirements.*
Milk feeds should continue as long as possible	3	17	*Milk feeds, ideally breast-feeding should continue for as long as possible*.
Benefits	3	17	*Mother's milk is like elixir to the child; Mother's milk is like the nectar of immortality for the baby*.
Complementary feeding messages:			
Readiness: Age	15	83	*Infant food shall be introduced only after the age of 6 months and up to the age of two years*.
Type: Other foods	13	72	*From 6 months onwards, the child needs supplementary food along with mother's milk. It is also recommended to give other food like vegetables, fruit, meat, etc*.
Manufacturer's Nutrition Plan	12	67	The provision of feeding practices messages that are cross-promoted with the company's products by making use of stages and flavours.
Type: Fruit	10	56	*From 10 to 24 months. Also, ingredients like fruit juices and mashed fruit, cooked and pureed spinach, boiled and mashed dals, cooked and mashed vegetables and curds, can be added to already prepared [product name], to make nutritious feeds for the babies*.
Type: Vegetables	10	56	*After 6 months, in addition to milk and cereal feeds, it is also appropriate to give your baby other foods like vegetables, fruits, etc. on the advice of your pediatrician*.
Type: Cereals	9	50	*After 6 months, in addition to milk and cereal feeds, it is also appropriate to give your baby other foods like vegetables, fruits, etc. on the advice of your pediatrician*.

Readiness: Ask health professional	8	44	*Since babies vary in their needs consult your healthcare professional for advice on when to introduce [product name] to your child*.
Frequency: Regular meals	2	11	*Feed daily to your baby for physical development good health and healthy growth of mind*.
Type: Meat	1	6	*From 6 months onwards, the child needs supplementary food along with mother's milk. It is also recommended to give other food like vegetables, fruit, meat, etc*.

Figure 4-6 Examples of feeding practices messages found on Nepal commercially produced complementary food products that were difficult to classify as being appropriate or inappropriate.

- *Infant food is not the sole source of nourishment of an infant'*. Also worded as '*Complementary food is not the only means to child nutrition*.
- Making use of an upper age limit:
  [Product name] is good to feed up to 4/5 years of age.
- *A child eating "Mitho Sagun" regularly may not eat sometimes because the child maybe fed up with its taste. Just because they do not eat during that time, does not mean they should leave feeding instantly. Feed again in one or two days, the child will start to eat like before*.
- *Use as part of a varied weaning diet*.

As denoted by the checklist (Question 6.2.1, Table 4-4), six (27%) of the labels explicitly highlighted the importance of exclusive breastfeeding for the first six months of life and none of the labels had any messages that undermined this message (Question 6.2.2, Table 4-4). For example: *"The World Health Organization recommends exclusive breastfeeding for 6 months. [Manufacturer's name] supports this recommendation."*

Conversely with respect to complementary feeding messages, none of the labels included all three of the recommended components of this message: The addition of (1) complementary foods from six months of age with (2) continued breastfeeding up to (3) two years or beyond (Question 6.3.1, Table 4-4). Fourteen (64%) of the labels did however include at least one of the message components, thereby qualifying as having partially met the recommendation. The component of the message that was included on all 16 labels was the addition of complementary foods from six months and a further 10 labels included the "continued breastfeeding" component of the message. None of the labels recommended the 'up to two years or beyond' component.

The complementary feeding recommendation was undermined by 71% of labels that included additional text. For example: *"Infant food shall be introduced only after the age of 6 months and up to the age of two years. [Product name] is a complementary food for babies after 6 months when breast milk can no longer totally cover the baby's growing nutritional requirements. Since babies vary in their needs, consult your healthcare professional for advice on when to introduce [product name] to your child"* and/or *"Infant food should be used only on the advice of a health worker as to the need for its use and the proper method of its use."* It is important to note that this could however be as a result of conflicts between what Codex requires and what the WHO recommends, and highlights the importance of providing countries with detailed guidance on what constitutes appropriate messaging and to ensure that global standard setting bodies are aligned in their recommendations / requirements.

This research shows that the STAG could consider expanding STAG 1 to ensure that messages/recommendations regarding infant and young child feeding practices should support and not undermine exclusive breastfeeding for the first 6 months of life followed by

the introduction of complementary foods together with continued breastfeeding to 2 years or beyond.

Gaps in available guidance on the labeling of complementary foods:

"*Recommendations regarding consulting a healthcare professional for advice on infant feeding may have been provided by manufacturers on the basis of the Codex Standard for Processed Cereal-based Foods for Infants and Young Children (Codex Alimentarius, 2006) which states that "the label shall include a statement indicating that the decision when precisely to begin complementary feeding, including any exception to six months of age, should be made in consultation with a health worker, based on the individual infant's specific growth and development needs". Quinn et al. (2010) argue that the Guiding Principles for Complementary Feeding of the Breastfed Child (PAHO, 2003), which explicitly call for the introduction of complementary foods at six months of age, supersede this recommendation. These guiding principles are based on a WHO Expert Consultation on the Optimal Duration of Exclusive Breastfeeding (WHO, 2001b) that considered the results of a systematic review of the evidence. The 2012 update of the original systematic review by Kramer and Kakuma (2012) supports recommending, as a general policy, exclusive breastfeeding for the first six months of life in both developing- and developed-country contexts. Messages regarding feeding practices for infants and young children provided by complementary food labels should not contradict, undermine, offer an alternative to or imply an exception to the recommendations of Code and WHA resolutions, other normative guidance such as the WHO Global Strategy for Infant and Young Child Feeding (WHO, 2003) and the Guiding Principles for Complementary Feeding of the Breastfed Child, and should be consistent with and supportive of national nutrition policy. This does not negate the need for health professionals to manage infants individually and to address adverse outcomes appropriately (Kramer & Kakuma, 2012)."*

Sweet et al., 2012b

Of those related to breastfeeding, 15 (83%) of the labels displayed the message that "Breastfeeding is best for your baby", this was followed by 8 (44%) of the labels containing messages regarding the continuation of breastfeeding while introducing solids. An age and readiness related recommendation for complementary feeding was stated on 15 (83%) of the labels and the type of other food to be included in the complementary feeding was recommended on 13 (72%) of the labels. See Table 4-9 for a full list of categories and examples of all feeding practices messages and recommendations.

4.3.2 STAG 2: Promotion is inappropriate if it contributes to childhood obesity and non-communicable diseases.

4.3.2.1 STAG 2a: Products should be limited in saturated fat, trans-fatty acids, free sugars, and salt.

4.3.2.1.1 Nutrient Composition

The nutrient composition extracted from the commercially produced complementary foods labels are presented in Table 4-10. The information is stratified by product category: cereal/porridge and homogenised/pureed food. The nutrient content per 100g provided on the label was then calculated as a 100 kcal serving. The last column of the table presents the calculated percentage of DRI/RNI or recommendations given by the WHO in each 100kcal serving.

Among the cereal products (n=18) it was noted that although they were recommended for different age groups (6 months + through to 24 months), the energy content was the same or similar, and additionally it was noted that the preparation instructions were similar in that there was no recommendation to increase the number of spoonfuls of cereal to account for higher energy needs in the older infant.

Even though nutrition data was not provided for each micronutrient, Table 4-10 shows that cereals tended to provide adequate amounts of energy, protein, and fats, and key micronutrients, especially when you consider that a 100 kcal portion provides 50% of the daily energy needs of complementary foods for a 6-8 month old breastfed child. In the 6 – 8 month group, both the carbohydrate component and the sugar component are high. There are currently no guideline recommendations on the proportion of sugar to total energy for those aged <24 months. However since sugar is under scrutiny, a reference for those >24 months was used (see Appendix G).

Only one homogenised pureed food was available in the sample and so it is difficult to judge the nutrient content. However it can be seen from Table 4-10, that little micronutrient data was provided on the label.

Table 4-10 Nutrient composition of commercially produced complementary foods in Nepal.

Nutrient	100 g Mean (minimum – maximum)	100 kcal Mean (minimum – maximum)	% DRI / RNI per 100 kcal[a]		
			6 – 8 months	9 – 11 months	12 – 23 months
Cereal/porridge					
Energy (kJ) (n=18)	1697 (1550 – 1865)	418 (417 – 419)	-		
Energy (kcal) (n=18)	406 (370 – 446)	100 (100 – 100)	50	33	18
Protein (g) (n=18-19)	15.4 (6.0 - 26.9)	3.7 (1.6 - 6.0)	42	44	42
Carbohydrates (g) (n=18-19)	69.3 (58.3 - 85.4)	17.2 (13.1 - 23.1)	75 - 96	51 - 66	28 - 61
Sugar[b] (g) (n=13)	12.9 (1.5 – 34.0)	3.2 (0.4 - 8.7)	64		
Dietary fibre (g) (n=17)	1.6 (0.5 - 4.9)	0.4 (0.1 - 1.3)	-		
Total fat (g) (n=18-19)	6.9 (0.5 - 10.6)	1.7 (0.1 - 2.5)	14 - 17	9 - 11	5 - 6
SFA (g) (n=7)	3.7 (1.6 - 4.0)	0.9 (0.4 - 1.0)	-		
MUFA (g) (n=6)	1.5 (1.5 - 1.5)	0.4 (0.4 - 0.4)	-		
PUFA (g) (n=6)	1.7 (1.7 – 1.7)	0.4 (0.4 – 0.4)	13	8	4
Trans FA (g) (n=6)	0.3 (0.3 - 0.3)	0.07 (0.07 - 0.07)	-		
LA (g) (n=9)	1.5 (1.5 - 1.5)	0.3 (0.3 – 0.3)	30 - 43	20 - 30	11 - 17
ALA (g) (n=6)	1.8 (1.8 – 1.8)	0.04 (0.04 – 0.04)	31 - 50	20 - 31	11 - 17
Vitamin A (µg RE) (n=13)	383.7 (350.0 – 436.0)	96.2 (85.1 – 108.0)	24		
Vitamin A (IU) (n=3)	1077 (430 – 1600)	-	-		
Sodium (mg) (n=10)	170.1 (100 – 310)	41.7 (24.3 - 76.9)	12		
Calcium (mg) (n=18-19)	334.5 (51.03 - 625)	86.2 (27.0 - 150.6)	22	22	17
Iron (mg) (n=16-17)	10.4 (5 - 23.5)	2.6 (1.2 - 5.9)	29	29	43
Zinc (mg) (n=15)	3.7 (2.5 – 7)	0.9 (0.7 - 1.8)	22		
Homogenised/pureed food (n=1)					
Energy (kJ)	351 (351 – 351)	423 (423 – 423)	-		
Energy (kcal)	83 (83 – 83)	100 (100 – 100)	50	33	18
Protein (g)	1.9 (1.9 - 1.9)	2.3 (2.3 – 2.3)	26	27	26
Carbohydrates (g)	12.5 (12.5 – 12.5)	15.1 (15.1 – 15.1)	66 - 84	44 - 58	24 - 31
Sugar[b] (g)	6.6 (6.6 – 6.6)	8.0 (8.0 – 8.0)	160		
Dietary fibre (g)	0.3 (0.3 – 0.3)	0.4 (0.4 – 0.4)	-		
Total fat (g)	2.8 (2.8 - 2.8)	3.4 (3.4 – 3.4)	28 - 34	19 - 23	10 - 12
SFA (g)	1.5 (1.5 - 1.5)	1.8 (1.8 – 1.8)	-		
MUFA (g)	-	-	-		
PUFA (g)	-	-	-		
Trans FA (g)	-	-	-		
LA (g)	-	-	-		
ALA (g)	-	-	-		
Vitamin A (µg RE)	-	-	-		
Vitamin A (IU)	-	-	-		
Sodium (mg)	0.1 (0.1 – 0.1)	0.1 (0.1 – 0.1)	0.03		
Calcium (mg)	-	-	-		
Iron (mg)	-	-	-		
Zinc (mg)	-	-	-		

[a] See Appendix G for recommendations and calculations

[b] Sugar values were captured from any mention of sugar in the nutritional information on the label and not specifically added sugar. Currently there are no guidelines for recommendation on the proportion of sugar from total energy for those aged <24 months however since sugar is under scrutiny, we used a recommended cut-off for those >24 months: Total sugars should not exceed 5.0 gr / 100 gr of solid food or 2.5 gr / 100 ml of beverage, (PAHO 2011), see appendix G for further details

4.3.2.2 STAG 2b: The portion size shown or recommended should provide an appropriate energy amount for the meal or part of a meal that it is designed to provide

The energy needs from complementary foods for infants with 'average' breast milk intakes in developing countries are provided in Table 4-11 (PAHO, 2003). These values were calculated by estimating children's total energy requirements at different ages and subtracting the average energy intake from breast milk (PAHO, 2003). Complementary food labels should recommend a daily ration that does not exceed the energy needs from complementary foods, in order to discourage overconsumption of the product which could result in the partial or total displacement of continued breastfeeding as well as other locally available and appropriate foods forming part of the diet (Quinn et al., 2010). From six months of age, caregivers should feed their child a variety of foods to ensure that their nutrient needs are met (PAHO, 2003). It follows that any single complementary food product should also not recommend a daily ration that provides 100% or near to 100% of the energy needs from complementary foods, in order to allow for variety in the complementary diet (Sweet, et al., 2012b).

Table 4-11 Daily energy needs from complementary foods and recommended number of meals for the breastfed child.

Age (months)	Daily energy needs from complementary foods for the breastfed child [kJ/day (kcal/day)]	Number of meals of complementary foods per days
6-8	837 (200)	2-3 (plus 1-2 snacks)
9-11	1,255 (300)	3-4 (plus 1-2 snacks)
12-23	2301 (550)	3-4 (plus 1-2 snacks)

Adapted from PAHO (2003)

In this study, only 16 of the labels (all cereal products) provided enough information to calculate a proposed daily ration (based on the serving and recommended number of servings per day on the label). Table 4-12 shows the energy provided by the products per manufacturers recommended serving; with and without milk (as directed by the product label). It can be seen that most of the products' energy serving (no added milk) provided between 74 – 195 kcal per portion.

This calculation excluded a single product that specifically stipulated a serving size of 1g. When milk was added (for those products which stipulated it) the energy value was 170 – 177 kcal per portion.

Although none of the product labels provided a daily ration, it was calculated (n=14) and it was determined that the daily ration ranged between 148 – 416 kcal per day. Of concern was that 11 (78%) of these products' daily ration amounted to more than 200 kcal/day. The study did not consider the appropriateness of the portion size but this would valuable in meeting the STAG recommendation and should possibly be added to the checklist (Table 4-4).

Table 4-12 Energy calculations per portion, per daily ration, with and without the addition of milk of commercially produced complementary foods in Nepal.

Cereal Products	Number of products	Mean (minimum – maximum)
Energy / 100g (kcal)	16	403 (370 - 446)
Serving size (g)	16	24.8 (1[a] - 50)
Daily ration (g)	14	76.3 (40 - 100)
Volume milk added to product (ml)	4	116 (75 - 130)
Energy from milk portion (kcal)	4	86 (56 - 96)
Energy per serving (no added milk) (kcal)	16	99 (5 - 196)
Energy per serving (with milk if applicable) (kcal)	4	172 (170 - 177)
Energy per daily ration (no added milk) (kcal)	14	309 (148 - 416)
Energy per daily ration (with milk if applicable) (kcal)	4	388 (341 - 531)

[a] This product label stated a teaspoon (which is equivalent to 1g) of dry product which may be an anomaly.

4.3.3 STAG 3: Promotion is inappropriate if the product does not make an appropriate contribution to infant and young child nutrition in the country.

4.3.3.1 STAG 3a: Products that do not adhere to applicable standards for safety and nutrient composition.

The scope of this research did not include any assessment of the product contents.

4.3.3.1.1 Mandatory and other label information

It is a globally accepted practice/requirement for all food labels to provide certain information regarding ingredients, traceability and even nutritional information. The study found that 96% of labels provided an ingredients list, 91% gave a batch number and 100% stated the best before date. Ninety-six percent of the labels also provided the nutrition composition/analysis of the product. One (5%) label expiry date was, however, unclear and two (10%) products were on sale beyond the expiry date (Table 4-13).

Table 4-13 Selected label information included on the labels of commercially produced complementary foods in Nepal (n=22).

Mandatory and other label information	Number of labels	Percentage of labels
Best before date	22	100
Ingredients list	21	96
Nutrition composition information	21	96
Batch number	20	91
Purchased after expiry date[a]	2	10

[a] one product could not be determined if it had expired since the expiry date had rubbed off

4.3.3.2 STAG 3b: Products should provide essential nutrients other than calories.

See Table 4-10 for a summary of the nutrition composition of complementary food products found in Nepal, based on the information provided on the label. The findings illustrate that manufacturers are inconsistent with the information provided on product labels.

4.3.3.3 STAG 3c: Promotion should encourage a diet based on a wide variety of foods, including minimally processed fruits, vegetables, and animal-source foods.

See Table 4-9 for a summary and examples of the infant and young child feeding practices messages provided on complementary food labels in Nepal.

Some examples of messages that could be considered to be appropriate since they advise minimally processed fruits, vegetables and animal source foods, such as the following:

- *From 6 months onwards, the child needs supplementary food along with mother's milk. It is also recommended to give other food like vegetables, fruit, meat, etc*.
- *From 10 to 24 months. Also, ingredients like fruit juices and mashed fruit, cooked and pureed spinach, boiled and mashed dals, cooked and mashed vegetables and curds, can be added to already prepared [product name], to make nutritious feeds for the babies*.

Further information that could provide detail on whether or not a diet based on a wide variety of foods, including minimally processed fruits, vegetables, and animal-source foods is encouraged could be obtained from the ingredients list and whether or not foods usually found in local cuisine or staple foods have been used. Ingredients lists were not captured as part of this study. This would therefore require further research, as well as a more thorough investigation into the local diet.

4.3.4 STAG 4: Promotion is inappropriate if it undermines the use of suitable home-prepared and/or local foods.

In Nepal, the majority of the available commercially produced complementary foods are imported. See Table 4-2 for country of origin of products. The ARCH Project Health Systems Study will provide data on whether the imported or locally produced complementary foods are more commonly provided to infants and young children in Nepal. Table 4-9 shows infant and young child feeding practices messages that are provided on commercially produced complementary food labels and it appears that none of these messages directly undermine home-prepared and/or local foods and many in fact emphasize the need to include vegetables, fruit and meat.

It was noticed that some products made use of flavors that could be considered as supporting local foods as they are flavors of local foods, this is however subjective. Examples of such flavors include '*Wheat Rice-Moong Dal Khichdi*' ('Wheat, rice and lentil porridge') and '*Wheat-Rice-Fruits'*. Data analysis on the flavor variants of products has not been done, and based on the methodology of this study it would not be meaningful to conduct analysis on flavors, since only one flavor variant of each product was chosen. This practice however highlights the need for more detail regarding what constitutes undermining (or supporting) local foods.

4.3.4.1 STAG 4a: Products should not be marketed as a complete substitute for home-prepared and/or local foods.

This research shows that this is a difficult and highly subjective criterion to assess and it would be valuable for the WHO STAG to provide more detailed guidance on the types of messages that could be perceived to be included as fitting this criterion. Alternatively, suggested wording could be provided that should be on the label of products, that clearly states that such products should be used together with / as part of the traditional diet and not as a substitute to a varied, balanced diet. The assumption made is that home-prepared / local foods are sufficiently nutritious to meet all the infant and young child's requirements, but this may not always be possible.

No product labels explicitly stated that they were a complete substitute for home-prepared and/or local foods, however a number of products contained text that could be considered

to suggest that the product is beneficial/ potentially similar to or as good as home-prepared and/or local foods:

- *This Lito combines the natural goodness & nutritive values of wheat, soyabean, rice & milk to provide balanced and essential nutrients to the child in every feed.*
- *[Product name] provides the combined benefit of cereals and pulses. Cereals and pulses complement each other and their combination is usually a part of traditional Indian diet.*

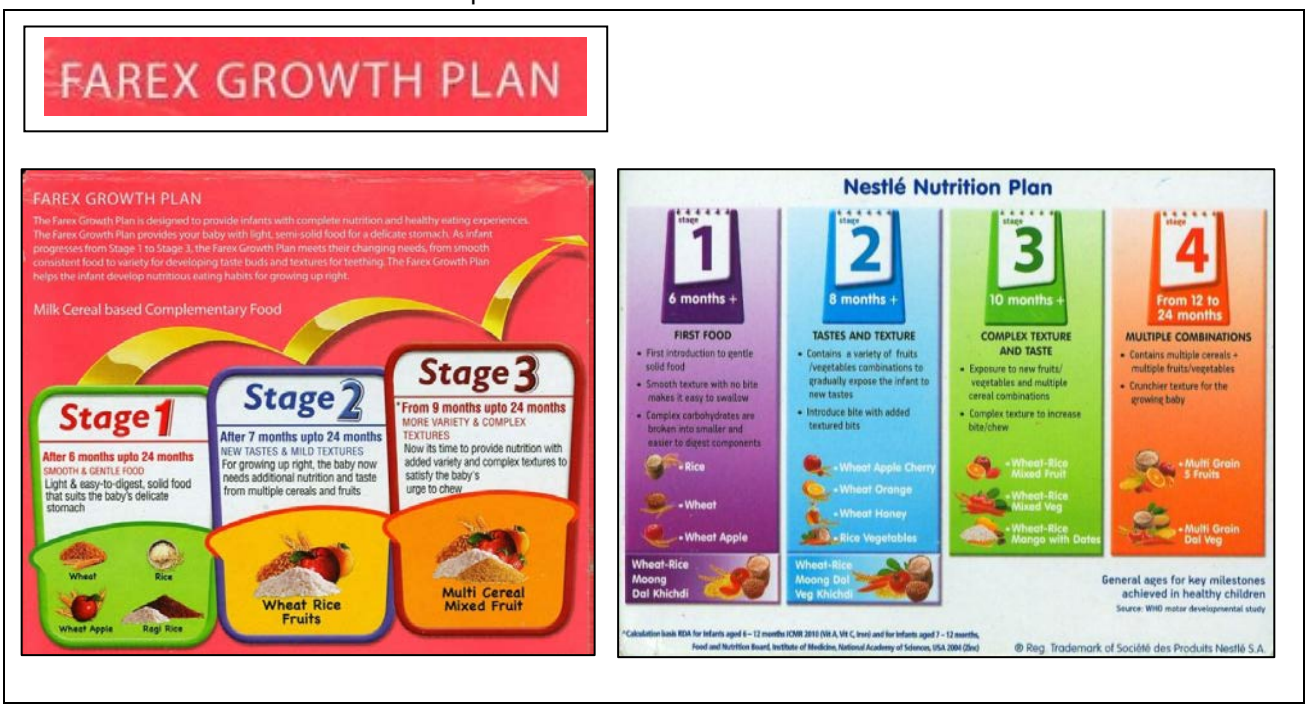
These examples highlight the subjectivity of this criterion.

4.3.4.2 STAG 4b: Promotion should not suggest that commercial products are inherently superior to home-prepared foods.

As with STAG 4a, this is a difficult and subjective criterion and more detailed guidance is required.

No commercial products explicitly stated that they are superior to home-prepared foods. However a practice was observed whereby manufacturers provided images and text of 'nutrition development plans'. These plans generally provided feeding practices messages that cross-promoted other products from the manufacturer by making use of stages and flavours that are part of the manufacturer's portfolio of products. See Figure 4-8 for examples. It could be considered that these plans subtly imply that the manufacturer's products are superior to or could replace traditional diets. This highlights the need for the WHO STAG to give further guidance as to promotion practices that suggest the products superiority to home-prepared foods.

Figure 4-7 Images showing manufacturer-endorsed nutrition plans on commercially produced complementary foods in Nepal that cross-promote other products in the manufacturers portfolio.



Furthermore, certain non-nutrition claims could potentially infer superiority of a product over that of the local diet. See Table 4-17 for examples of non-nutrition claims, some of which (for example claims regarding quality) could highlight a benefit of the product.

4.3.4.3 STAG 4c: Promotion should not imply that home-prepared or local foods should be delayed until after commercial products are fed.

None of the labels directly stated that the feeding of home-prepared or local foods should be delayed until after commercial products are fed. However, some feeding practices messages on commercially produced complementary foods could be interpreted to imply that the product should be the first food fed. For example a cereal product included the message: "*After 6 months, in addition to milk and cereal feeds, it is also appropriate to give your baby other foods like vegetables, fruits, etc. on the advice of your pediatrician*." This is as with other STAG 4 criteria highly subjective and countries would benefit from more detailed guidance.

When manufacturers provide phrases for product use that imply that the product is suitable for children less than six months of age, these could potentially be interpreted as stating that the commercially produced complementary food product is to be given before home-prepared or local foods. See section 4.3.1.1 for a description of practices that could imply suitability before six months of age.

See Table 4-9 for a full list of the prevalence and examples of feeding practices messages.

This research highlights that all of the STAG 4 criteria are difficult and highly subjective and it would be valuable for the WHO STAG to provide more detailed guidance on the types of messages that are appropriate/inappropriate. Alternatively, suggested wording could be provided that should be on the label of commercially produced complementary foods, that clearly states that such products should be used together with / as part of the traditional diet and not as a substitute to a varied, balanced diet. The assumption made is that home-prepared / local foods are sufficiently nutritious to meet all the infant and young child's requirements but this assessment was not part of the scope of this study.

4.3.5 STAG 5: Promotion is inappropriate if it is misleading, confusing, or could lead to inappropriate use.

4.3.5.1 STAG 5a: Health claims should not be allowed unless specifically approved by national or international authorities.

The STAG criteria refer only to health claims being inappropriate. A wide range of claims were found on complementary food labels in Nepal. These included nutrient content claims, nutrition function/ other function/ implied health claims, nutrient comparative claims, reduction of disease risk claims and non-nutrition/health claims. See Tables 8-1, 8-2 and 8-3 in Appendix H for a complete description of the prevalence of as well as examples of the various categories of claims.

Denoting key information, such as a nutrient content claim may be seen as helpful, since these claims could highlight nutrients of public health importance to this age group (e.g. iron and zinc) and are clearly measurable (e.g. according to Codex guidelines, a 'source of…' claim requires that the product provides 15-30% of the NRV of the specific vitamin per serving). Guidance is however necessary to help countries establish which nutrition claims could be considered appropriate, how they should be worded and the appropriate nutrient profile of the products that could carry such claims.

4.3.5.1.1 Nutrition and health claims

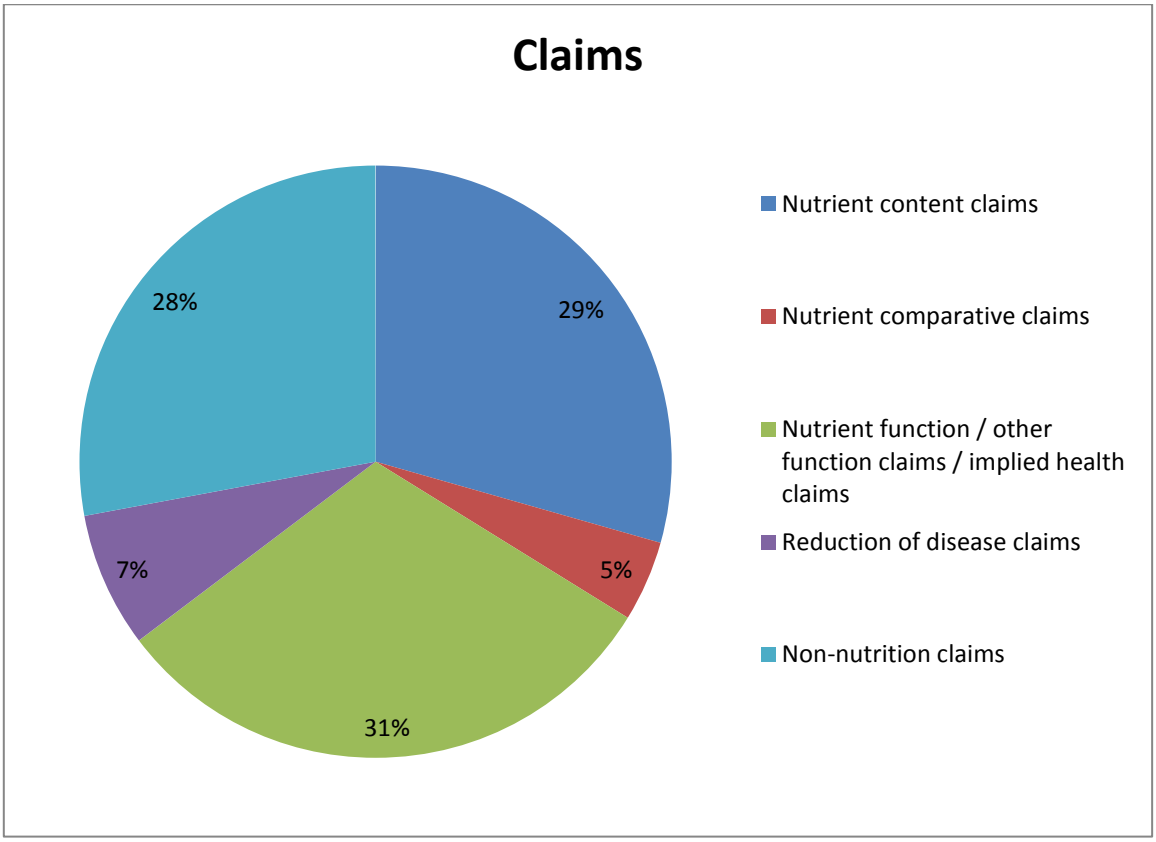
Codex Alimentarius has clear definitions for the various categories of nutrition and health claims commonly used/permitted on foods (see Table 4-14).

Table 4-14 Codex Alimentarius definitions of categories of nutrition and health claims.

Nutrition claim	Any representation which states, suggests or implies that a food has particular nutritional properties including but not limited to the energy value and to the content of protein, fat and carbohydrates, as well as the content of vitamins and minerals. The following do not constitute nutrition claims: the mention of substances in the list of ingredients; the mention of nutrients as a mandatory part of nutrition labeling and quantitative or qualitative declaration of certain nutrients or ingredients on the label if required by national legislation. Nutrition claims include nutrient content claims and nutrient comparative claims.
Health claim	Any representation that states, suggests, or implies that a relationship exists between a food or a constituent of that food and health. Health claims include nutrient function/other function/implied health claims and reduction of disease risk claims.
Nutrient content claim	A nutrition claim that describes the level of a nutrient contained in a food e.g. source of calcium.
Nutrient comparative claim	A claim that compares the nutrient levels and/or energy value of two or more foods. Examples: “reduced”; “less than”; “fewer”; “increased”; “more than”.
Nutrient function claim	A nutrition claim that describes the physiological role of the nutrient in growth, development and normal functions of the body. “Nutrient A (naming a physiological role of nutrient A in the body in the maintenance of health and promotion of normal growth and development). Food X is a source of/ high in nutrient A.”
Other function claim	Concerns specific beneficial effects of the consumption of foods or their constituents, in the context of the total diet on normal functions or biological activities of the body. Such claims relate to a positive contribution to health or to the improvement of a function or to modifying or preserving health e.g. ‘Substance A (naming the effect of substance A on improving or modifying a physiological function or biological activity associated with health). Food Y contains x grams of substance A.’
Reduction of disease risk claim	Relates to the consumption of a food or food constituent, in the context of the total diet, to the reduced risk of developing a disease or health-related condition. Risk reduction means significantly altering a major risk factor(s) for a disease or health-related condition. Diseases have multiple risk factors and altering one of these risk factors may or may not have a beneficial effect. The presentation of risk reduction claims must ensure, for example, by use of appropriate language and reference to other risk factors, that consumers do not interpret them as prevention claims e.g. ‘A healthful diet low in nutrient or substance A may reduce the risk of disease D. Food X is low in nutrient or substance A.’

Claims are commonly made on labels and Figure 4-9 shows that of the claims made, 31% related to nutrient function/ other function/ implied health claim, 29% related to nutrient content claims, 28% related to non-nutrition claims. Reduction of disease claims (7%) and nutrient comparative claims (5%) were less common. See sections below and Appendices H and I for a complete description of the prevalence of, and examples of the various categories of claims.

Figure 4-8 Claims made on commercially produced complementary food labels in Nepal.



Ninety-one percent (n=20) of labels contained a nutrient content claim (see Table 4-15).

Table 4-15 Nutrient content claims on commercially produced complementary food labels in Nepal (n=20).

Nutrient content claims	Number of labels	Percentage of labels
Protein	13	65
Energy	9	45
Calcium	7	35
Iron	7	35
Vitamin C	7	35
Essential fatty acids	6	30
Vitamin A	6	30
Vitamin D	6	30
Vitamins	6	30
Zinc	6	30
Vitamins and minerals	5	25
Iodine	3	15
Minerals	3	15
Amino acids	1	5
Fiber	1	5
Prebiotics[a]	1	5

[a] Prebiotics may not be considered nutrients

See Appendix H for a full breakdown of example text from labels for all of the above categories of nutrient content claims.

Certain nutrient content claims may be considered as being appropriate if they address the relevant addition of nutrients of public health concern. For example a product stating: "*Fortified with vitamins and minerals*" could be considered partially appropriate if the fortification levels and added vitamins and minerals were added at the appropriate level and

the vitamins and minerals were of public health concern. This highlights the need for detailed guidance on what is considered an appropriate nutrient content claim. Health claims however may not be considered appropriate on foods for infants and young children. For example: "*3 serves of [product name] provide approximately 75% of RDA of important immuno-nutrients like iron, zinc, vitamin A and vitamin C."* It would however be necessary to also provide guidance on the appropriate nutrient profile of products that could be permitted to make a nutrition claim.

Ninety-five percent of the labels (n=21) made a nutrient function/other function/implied health claim (see Table 4-16). Although some such function claims may be considered appropriate if they address nutrients of public health concern such as, *"ALA (Omega 3 fatty acid) contributes to brain development. Iodine helps in normal development of brain cognition: Vitamin A contributes to healthy vision",* others may be considered inappropriate. For example: *"[Product name] is a pre-cooked, easy-to-digest weaning cereal packed with essential vitamins and minerals that are important for your baby's development. It is prepared with [product name]'s Z-line technology, that breaks down complex carbohydrates into simpler form, making it easier for a baby to digest."* Similar guidance as suggested above for nutrient content claims would be required for any permitted nutrient function/other function claims.

Table 4-16 Nutrient function/other function/ implied health claims made on commercially produced complementary food labels in Nepal (n=21).

Claims	Number of labels	Percentage of labels
Nutrition/nutritious (including nutrient-dense)	13	62
Easy to digest	11	52
Immunity	11	52
Benefit/beneficial (including important, essential)	9	43
Growth	9	43
Goodness/good	8	38
Development	7	33
Protein function	7	33
Brain/mental	6	29
Calcium function	6	29
Energy function	6	29
Health	6	29
Vitamin A function	6	29
Vitamin D function	6	29
Bones	5	24
Carbohydrates (including sugar) function	5	24
Essential fatty acids function	5	24
Iodine function	5	24
Iron function	5	24
Vitamin C function	5	24
Vitamin E function	5	24
Zinc function	5	24
Branded process[a]	5	24
Acceptance of table food/texture	4	19
Balanced function	4	19
B Vitamins (includes individual B vitamins not captured elsewhere, i.e. all other B Vitamins except Vit B_1) function	4	19
Fat (includes saturated fat, monounsaturated fat, etc.) function	4	19
Phosphorous function	4	19
Vitamin B_1 function	4	19
Copper function	3	14
Choline function	3	14
Magnesium function	3	14
Palate/taste development	3	14

Claims	Number of labels	Percentage of labels
Selenium function	3	14
Transforming food to energy	3	14
Vitamins and minerals function	3	14
Best for babies/best start/better for	2	10
Name: Sub brand is a function claim	2	10
Strength (including stamina)	2	10
Vision	2	10

[a]*The Z Line Process in [product name] breaks the carbohydrates into smaller easier to digest components."*

Other nutrient function/other function/ implied health claims which featured on only one label (5%) include: Name: Brand name is a function claim; gentle/mild; micronutrient function; dietary fibre function; potassium function and sodium function.

See Appendix H for a full breakdown of example text from labels for all of the above categories of nutrient function/other function/implied health claims.

Three (14%) of the labels contained nutrient comparative claims. See Figure 4-10 for examples of the text used in the comparative claims included. It would need to be determined if any comparative claims are considered appropriate.

Figure 4-9 Nutrient comparative claims found on commercially produced complementary foods in Nepal.

- *Vegetable protein is better than meat protein.*
- *Nepal's first best full of protein product.*

Twenty-three percent (n=5) of labels included a reduction of disease risk claim which could be considered inappropriate for foods for infants and young children. Of these labels, 3 (60%) included a disease specific anaemia related claim and an example of the label text is "*Introduction of iron rich/fortified foods plays an important role in the prevention of anaemia"*. Two (40%) of the claims were disease related claims. For example: *"[Product name] is highly nutritious, immune enhancer and energetic health food. It also protects from common cold and fever for all age groups."*

Some products used non-nutrition claims (Table 4-17) to highlight a benefit of the product.

Table 4-17 Non-nutrition claims made on commercially produced complementary food labels in Nepal (n=19).

Claims	Number of labels	Percentage of labels
Vegetarian	14	74
Additives	11	58
Quality	5	26
Name: Brand is a non-nutrition claim	5	26

Other non-nutrition claim categories which featured only on one label (5%) included: certification: safety/quality; packaging; protein sources; safe and specially prepared.

See Appendix H for a full breakdown of example text from labels for all of the above categories of non-nutrition claims.

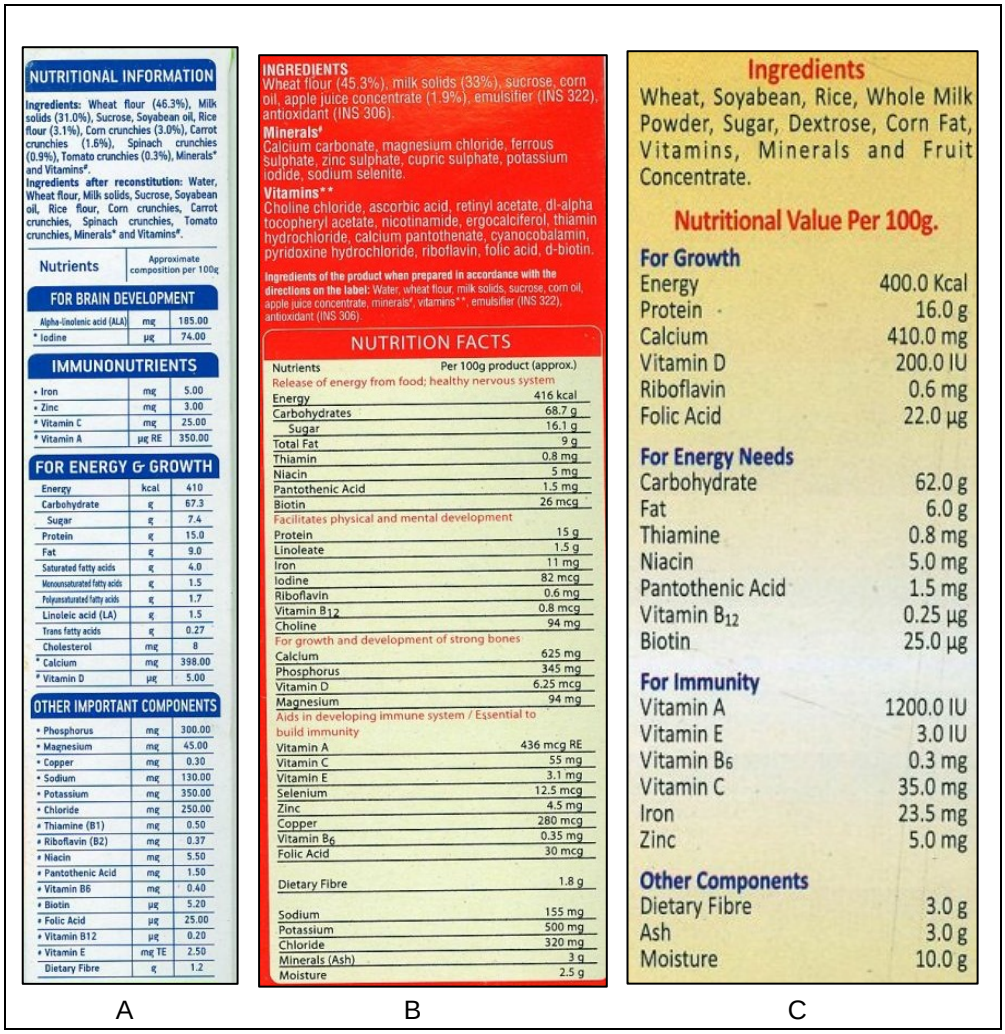
In Nepal, there were some products that made use of an alternative method to imply nutrient function claims, by making use of the Nutrition Information table to group nutrients according to specific functions.

See Figure 4-11 (A, B and C) for examples of different products' nutrition information tables that could be classified as presenting nutrient function claims. This may be an illustration of

a novel or evolving marketing technique that companies use to subtly infer nutrient function claims and it is necessary to determine if this appropriate or not.

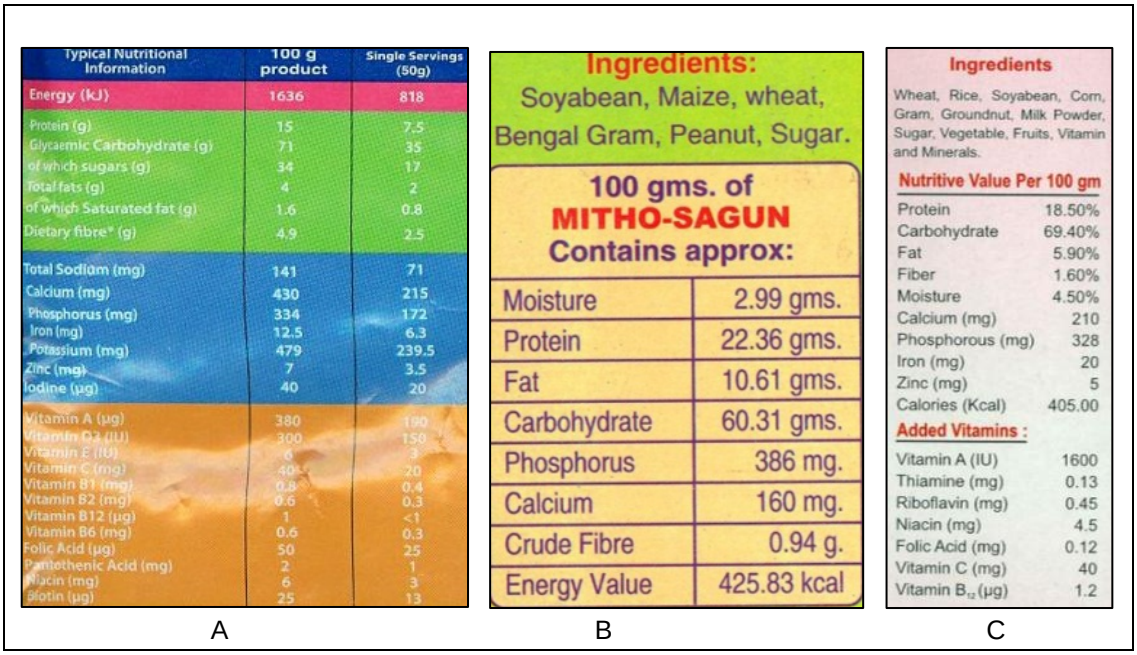
The nutritional information was presented in a number of different formats. Some of the labels grouped the nutrients according to their function (see Figure 4-11). This use of novel ways of presenting nutritional information occurs in both imported and local products, with Figure 4-11 (A and B) being two examples from imported products (India), while Figure 4-11 (C) is an example from a locally produced product.

Figure 4-10 Examples of nutrition information tables on commercially produced complementary foods in Nepal displaying nutrient function claims in a novel format.



Other formats are shown in Figure 4-12 where (A) displays the nutrients grouped according to macronutrients, minerals and vitamins but without titles for each section; (B) displays a minimal number of nutrients presented (4 locally produced products displayed the nutrition information in this format) and; (C) contains the nutrition information table with macronutrients represented as percentages, and micronutrients presented as absolute values (1 locally produced product contained this format).

Figure 4-11 Other formats used by commercially produced complementary foods in Nepal to present nutrition information.



The inconsistent presentation of the nutritional information may be confusing to a mother and may make it difficult to compare nutritional value of products. This research shows that there is a need to provide specific guidance on the presentation of the nutrition information tables on product labels for commercially produced complementary foods.

4.3.5.2 STAG 5b: Information and instructions should be clear and correct and appropriate for the language and literacy of the target population.

The labeling study did not assess literacy, but the checklists were completed from a mother/caregivers perspective. For all labels that did not include text in English or Nepali (as required in the Nepali regulations) only the images on the label were assessed, as it was assumed that a Nepali mother/caregiver could not understand the text if it was not in English or Nepali. In addition, letter size was not assessed.

4.3.5.2.1 Languages

Results from the checklist showed that all products in the sample contained text in the Nepali or English language which is in accordance with local legislation (Question 1, Table 4-4). Sixty-four percent of the labels had all text in in English, 14% had all text in Nepali, 22% had all text in both languages and 59% provided some of the information in another (non-official) language.

Thirteen labels contained all text in English and some text in other non-official languages (12 of which contained Hindi and one contained French, Spanish, Greek, Portuguese and Arabic); five labels contained all text in English and Nepali; three labels contained all text in Nepali and some in English and one label had all information in English only.

Even though legislation allows for labels to be in Nepali or English, it is noted from the 2011 National Population and Housing Census for Nepal for the Kathmandu district that only 0.04% of the female population have English as their mother language and 1.7% have English as their second language (Census, 2011).

Table Languages in which label information was provided on complementary food labels (n=22)

Label information provided in the following language(s)	ALL information provided in:		SOME information provided in:	
	Number of labels	Percentage of labels	Number of labels	Percentage of labels
English	14	64	3	14
Nepali & English	5	22	0	0
Nepali	3	14	0	0
Other non-official language	0	0	13	59
Not applicable	0	0	6	27

4.3.5.2.2 Inserts

Of the sample, four (18%) products contained an insert[1] that consisted of translations of the information printed on the label itself (as defined in Appendix F). One insert however also contained a warning, *"NOTE: not to be eaten by Diabetes patients, because this contains sugar*", that was not included on the label itself.

4.3.5.2.3 Preparation and use

Although the checklist shows that all the labels provided 'instructions for safe and appropriate preparation and use' (Question 6.4, Table 4-4), more detailed guidance is required on what constitutes 'appropriate instructions'. Table 4-18 summarises the type of preparation method recommended on the product label, while Table 4-19 presents the categorised preparation and use instructions present on the labels.

Table 4-18 Type of preparation recommended on complementary food labels in Nepal (n=22).

Categories of preparation type	Number of labels	Percentage of labels
Instant - add water	16	73
Instant - add milk	3	14
Instant - add water or milk	2	9
Ready to eat/drink	1	5

Table 4-19 Preparation and use instructions used on complementary food labels in Nepal (n=22).

Categories of preparation/use instructions	Number of labels	Percentage of labels
How to feed: Feed child	18	82
Quantity: Gradually increase	15	68
Consistency: Smooth/avoid lumps	15	68
Feeding table	14	64
Use as advised by health practitioner	12	55
Scoop provided	10	48
Serving suggestions: Other (e.g. add salt,)	4	18
Type of milk: Milk	3	14
Frequency: x no. of times per day	3	14
Mixing: Milk or water	2	9

Preparation and use instruction categories found on only one label (5%) included: add: sugar; how often: as many tines per day as desired; prep: microwave and when: any time of day.

The current checklist is designed so that a product label scores a 'yes' if it has any (even if only one) preparation and use instructions present on the label. However, there is no

[1] For the purposes of this study, an "insert" is defined as printed information (excluding the product label) that is inserted into the product or affixed to it e.g. a package insert, fix-o-form, under-lid leaflet, information printed on the reverse side/backing of a "peel-away"/removable label or on the reverse side of the packaging etc.

guidance on the appropriateness of the wording of the preparation and use instructions, or a recommendation on a minimum set of preparation and use instructions. See Table 4-19 for a description of all preparation and use instructions that appeared on the labels of commercially produced complementary foods in Nepal and see Figure 4-13 for examples of the types of wording of some preparation and use instructions contained within the sample.

Figure 4-12 Examples of instructions for use that may be considered inappropriate from Nepalese commercially produced complementary food labels.

- *For starting the habit, a general mixture is prepared by mixing one teaspoon [product name] with 4/5 teaspoons of boiled water. This is to be fed once a day for one week. In the second week, feed morning and evening. After that, according to need and amount digestible feed morning, afternoon and evening. This must be fed in differences of 4 to 6 hours. This can also be fed by mixing with milk, if fried with ghee as a pudding fry for a short while under slow fire, because [product name] is well cooked flour. If the child likes it sweeter you can feed it adding a little sugar. After the child is 7/8 months they also like salty, so when making with water you could mix some amount of salt. But don't mix salt when making with milk.*
- *Method of preparation: Put the required amount of [product name] into a clean bowl and add boiling water as required. Feeding Method: Start feeding with 1 teaspoonful from 5 months onwards and increase the quantity as the baby is able to digest.*
- *Shake until proper 'lito' is made.*
- *This nutritious food having been pre-cooked, need not be cooked again*.
- *Boil drinking water in a clean pot take the required amount of [Product name] Lito in a bowl and mix the pre-boiled water as necessary then add sugar or salt according to test*.

Some labels provided messages such as "*Useful for the lactating mother, adult and old aged people also*" and "*Specially for infant to old*." The appropriateness of such messages needs to be considered.

4.3.5.2.4 Safety messages

Table 4-20 provides the categorized safety messages which are a subset of the instructions for the preparation and use of the product. Safety messages regarding cleanliness of utensils and surfaces, the use of boiled water and the importance of washing hands were the main messages found on the labels which were found on 19 (86%), 17 (77%) and 16 (73%) of labels respectively.

Table 4-20 Safety messages used on complementary food labels in Nepal (n=22).

Categories of safety messages	Number of labels	Percentage of labels
Use clean/wash surfaces/equipment/utensils	19	86
Use boiled/clean water	18	82
Wash hands	16	73
Allow to cool	14	64
Use as advised by health professional	12	55
Use boiled/pasteurized milk	6	27
Microwave with care	1	5
Test temperature before feeding	1	5

The manner in which safety messages are evaluated according to the checklist is similar to that for preparation and use instructions, whereby if a product includes one safety message, that product will qualify as having safety messages. However there is no guidance on the quality of the message(s) or a minimum set of standards that should be used. The following example, which was the only safety message on one product's label, should be considered for appropriateness: "*Also feed 'Mitho Sagun' daily according to*

doctor's advice". The indication to 'use as advised by a health worker' is appropriate for the labels on breast-milk substitutes but appropriate messages and wording for safety messages on the labels of complementary foods needs to be considered and more specific advice would be valuable.

4.3.5.2.5 Storage

The checklist (Table 4-4, Question 6.7) shows that all labels in the sample contained instructions for safe and appropriate storage. Further analysis of storage instructions showed that general storage instructions (95%), storage after opening (82%) and length of storage after opening (59%) were the most common suggestions provided, (see Table 4-21).

Table 4-21 Types of storage instructions provided on commercially produced complementary food labels in Nepal (n=22).

Categories of storage instructions	Number of labels	Percentage of labels	Example text from labels
General storage	21	95	*Store in a cool dry place.*
Storage after opening	18	82	*After each use, replace lid tightly.*
Length of storage after opening	13	59	*After opening use the contents within one month or the expiry date whichever is earlier.*

4.3.5.2.6 Warnings

The checklist data (Table 4-4, Question 12) showed that 32% percent of the labels did not provide one or more of the stipulated warnings (including a warning stating the health hazards/potential risks of inappropriate preparation, use and storage, or advising against certain preparation/use/storage practices).

Table 4-22 examines in more detail the warnings, categorized into themes. The most commonly used warning of the 15 labels which stated a warning, was to "discard unfinished food or drink" and was found on 14 (93%) of the labels, followed by a warning regarding the prevention of microbial contamination on 13 (86%) of the labels. One product, categorized as 'Other' and so not included in Table 4-22 stipulated that the product should "*Not to be eaten by diabetes patients, because this contains sugar*". This instruction was, however, present on the product insert.

Table 4-22 Warnings used on commercially produced complementary food labels in Nepal (n=15).

Categories of warnings	Number of labels	Percentage of labels
Warnings related to use/feeding		
Not suitable for children under 6 months	1	7
Not to be used as a milk substitute	1	7
Warnings related to storage		
Discard unfinished food or drink	14	93
Prevention of Microbial Contamination	13	86
Warnings related to preparation		
Follow the preparation instructions exactly	12	80
Keep to the recommended dosage	12	80

4.3.5.3 STAG 5c: Promotion should not imply that products contain more of an ingredient than they in fact do.

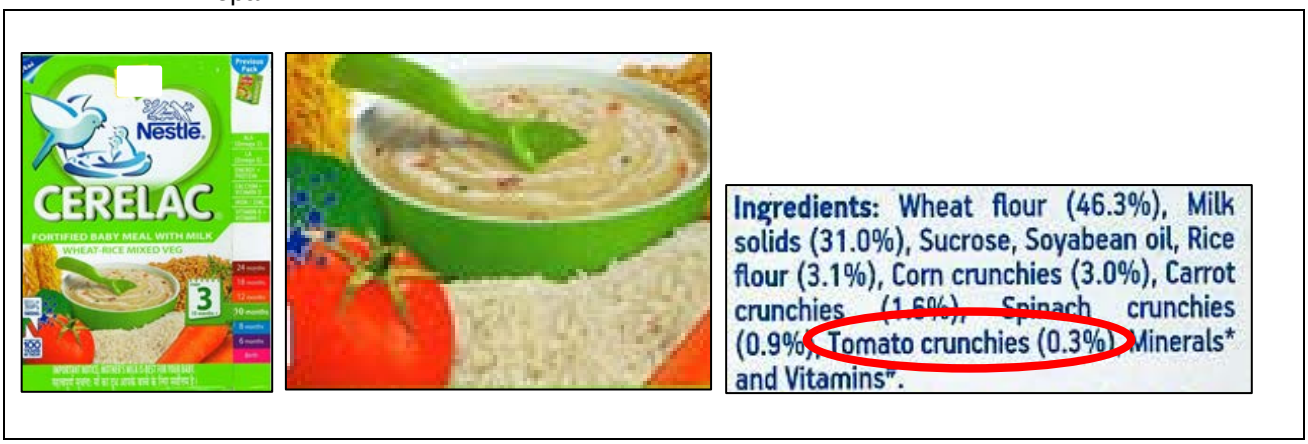
An example of a misleading image is shown in Figure 4-14, that illustrates an image of a

whole tomato on the front of pack label, but the ingredients list shows that only 'tomato crunchies' are present in the product, at a minimal amount of 0.3%. It is assumed that 'crunchies' are dehydrated vegetables, however it is unclear.

The categorization of imagery as misleading is not a labeling practice that was included in the checklist and could be considered to be added or included in guidance.

See section 4.3.6.1 for a further description of the types of images commonly found on complementary food labels.

Figure 4-13 Potentially misleading image on a commercially produced complementary food label in Nepal.



4.3.6 Other/Gaps in the STAG criteria

Based on the review and analysis of labels included in this study, several additional labeling components emerged that are recommended for inclusion in the discussion and guidance on the inappropriate promotion of commercially produced complementary food products.

4.3.6.1 Images

Certain images, apart from those already included in the criteria, used on the labels of commercially produced complementary foods could be considered to be inappropriate, whereas others may not. Especially in populations where illiteracy is high, consideration and guidance needs to be given regarding how images could be used to communicate certain messages. This research showed that other images mainly used on the labels of commercially produced complementary foods included a jug of milk (95%), the ingredients of the product (95%), a bowl (86%) and the ready to eat/prepared product (82%) (see Table 4-23).

Table 4-23 Images used on the labels of commercially produced complementary foods in Nepal (n=22).

Image	Number of labels	Percentage of labels
Ingredients/composition	21	95
Jug of milk	21	95
Bowl	19	86
Ready-to-eat/prepared product	18	82
Foods that are not ingredients	14	64
Preparation/use illustrations	14	64
Animals: Mother and babies	7	32
Design elements: Hearts/circles	5	23
Other products	4	18
A previous front-of-pack shot / Image of individual portions within the container	4	18

Child	3	14
Design elements: Stars/moon/sun/clouds/rainbow	3	14
Scientific images/branded ingredients	3	14
Other	3	14
Animals/ insects	2	9
Brand mascots	2	9
Design elements: Leaves/trees/plants/flowers/landscapes/shells	2	9
Mother and child	2	9
Raw product	1	5
People using/with the product	1	5

4.3.6.2 Endorsements

Manufacturers make use of endorsements or text conveying expertise in order to increase the appeal of a product. The use of endorsements or the manufacturer portraying themselves as experts in infant feeding may not be appropriate on commercially produced complementary foods and guidance on this practice is considered to be necessary.

Endorsements or text conveying expertise were used on 13 (59%) of labels. The majority (92%) of these endorsements were made by the manufacturer (see Figure 4-15 and Figure 4-16). Other endorsements used are presented in Table 4-24.

Table 4-24 Endorsements/Text conveying expertise used on commercially produced complementary food labels in Nepal (n=13).

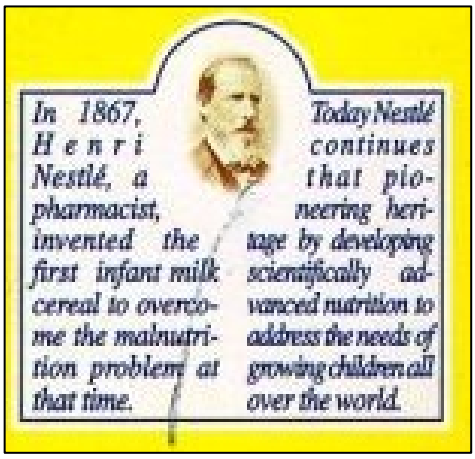
Categories of endorsements/ text conveying expertise	Number of labels	Percentage of labels	Example from labels
Manufacturer	12	92	*[Manufacture's name] Nutrition Plan. [Manufacturer's name] nutritional compass (see Figure 4-13).*
Longevity	5	36	*[Manufacturer's name] Celebrating 100 years in India (see Figure 4-14).* *[Manufacturer's name] has put 135 years of experience in infant nutrition to arrive at the [product name]*
Employee	3	23	*In 1867, Henri Nestle a pharmacist, invented the first infant milk cereal to overcome the malnutrition problem at the time (see Figure 4-16).*
Health practitioner / practice	3	23	*In 1867, Henri Nestle a pharmacist, invented the first infant milk cereal to overcome the malnutrition problem at the time.*
Manufacturer represented as expert	3	23	*Today [product name] continues that pioneering, heritage by developing scientifically advanced nutrition to address the needs of growing children all over the world. [Product name] has put 135 years of experience in infant nutrition to arrive at the [product name]*
Award recipient	1	8	*The Queen's award for enterprise international trade 2013*

Figure 4-14 An example of a manufacturer endorsement, in this case a 'Nutritional Compass', on a commercially produced complementary food label in Nepal.

Figure 4-15 Example of a manufacturers endorsement used on commercially produced complementary food labels in Nepal, whereby the manufacturer's longevity in the country is promoted or marketed.

Figure 4-17 shows an example of a statement that implies the product and manufacturer's superiority and expertise in the field of infant and young child nutrition. In this example, an employee, a health practitioner, and a manufacturer are endorsing the product, in addition to the manufacturer being represented as an expert. The appropriateness of these forms of endorsement needs to be determined.

Figure 4-16 Example of an endorsement by a manufacturer on a commercially produced complementary food label in Nepal.



'In 1867, XXX a pharmacist, invented the first infant milk cereal to overcome the malnutrition problem at the time. Today [Product name] continues that pioneering, heritage by developing scientifically advanced nutrition to address the needs of growing children all over the world. [Manufacturer's name] has put 135 years of experience in infant nutrition to arrive at the [product name] Developmental Nutrition Plan.'

4.3.6.3 Invitation to interact

When assessing the entire sample, 77% (n=17) of commercially produced complementary food labels contained some form of invitation to interact with the manufacturer on the product label (Table 4-25). Eighteen percent of local and imported products provided a telephone number, 71% a postal or physical address and 71% an email address, without using additional promotional and marketing techniques such as 'contact our experts' or other similar messages; none of the labels advertised toys, competitions or rewards as a means to incentivize contact by the purchaser. See Figure 4-18 for some examples of invitations to interact that were observed on the labels of commercially produced complementary foods in Nepal.

For those companies that also manufacture or distribute breast-milk substitutes and other products falling within the scope of the *Code,* Article 5 of the Code states 'Marketing personnel, in their business capacity, should not seek direct or indirect contact of any kind with pregnant women or with mothers of infants and young children.' (WHO, 1981). The document, *Using the Code of Marketing of Breast-milk Substitutes to Guide the Marketing of Complementary Foods to Protect Optimal Infant Feeding Practices* recommends that this restriction applies to the marketing personnel of companies that produce breast-milk substitutes and commercially produced complementary foods, even when those staff only promote complementary foods/products that target infants older than six months (Quinn *et al*., 2010).

Therefore, the provision of a customer care line telephone number, postal/physical address, fax number or email address could be considered to be acceptable, to allow for consumers to report product defects or quality issues to manufacturers, as long there was no additional message such as 'contact our nutrition experts' that serves to invite a mother to make direct contact with marketing personnel from manufacturers that produce breast-milk substitutes. However, the provision of websites, QR codes and other such invitations to interact with the manufacturer may not be considered to be appropriate, since they usually result in the consumer being exposed to additional and often promotional information. Further guidance on this is necessary.

With regards to an invitation for the purchaser to interact with the company's marketing personnel (such as websites, SMS lines, invitations to join a baby club or Quick Response (QR) codes), none of the products that were produced by companies that also manufactured breast-milk substitutes in Nepal included such an invitation on the product label (see Table 4-4; Question 14.2). This is in compliance with current guidance.

There is currently no guidance available on what would be considered 'appropriate' invitations to interact on the labels of commercially produced complementary foods that are not produced by manufacturers that also produce breast-milk substitutes. *Using the Code of Marketing of Breast-milk Substitutes to Guide the Marketing of Complementary Foods to Protect Optimal Infant Feeding Practices* also states that 'For those companies that do not manufacture or distribute breast-milk substitutes and other products falling within the scope of the *Code*, their marketing personnel, in their business capacity, are not explicitly prohibited from seeking either direct or indirect contact with pregnant women or with mothers of infants and young children outside the health care system. These companies should ensure that their marketing activities and/or promotional materials for their complementary food products do not undermine exclusive and sustained breastfeeding [WHA 49.15]. (Quinn, et al., 2010)'.

Table 4-25 Type of invitations to interact with the manufacturer used on commercially produced complementary food labels in Nepal (n=17).

Invitation to interact	Number of labels	Percentage of labels
Customer care line	13	76
Email address	12	71
Postal address	12	71
Telephone number	3	18
Website	2	12

Figure 4-17 Examples of images of invitations to interact with the manufacturer used on commercially produced complementary foods in Nepal.

4.3.6.4 Provision of other information

Some labels provided other health information (see Figure 4-19) and as currently no guidance is given on this, it would be important to consider the appropriateness of these messages on commercially produced complementary foods.

Figure 4-18 Examples of provision of other information on the labels of commercially produce complementary foods in Nepal.

Six (27%) of the labels had a manufacturers slogan and tag line reading "*Good food, good life*".

4.4 Summary of labeling practices observed in the ARCH Project labeling study where guidance is required as to whether they are appropriate or not that are not clearly covered by the WHO STAG criteria:

- The provision of infant and young child feeding messages.
- The use of the nutrition information table to group nutrients according to specific functions.
- The use of images showing the provision of a manufacturer-endorsed nutrition plan that also cross-promotes other products in the manufacturer's portfolio.
- The use of nutrition claims (STAG 5a only refers to health claims).
- Specific guidance on the minimum requirements of preparation and use instructions, storage instructions and warnings.
- The use of images.
- The use of endorsements.
- The types of invitations to interact with the manufacturer.
- The provision of other public health messages.

5 RESULTS AND DISCUSSION OF COMMERCIALLY PRODUCED FOODS FOR GENERAL CONSUMPTION COMMONLY FED TO CHILDREN UNDER THE AGE OF TWO YEARS

5.1 Description of commercially produced foods for general consumption commonly fed to children under the age of two years products

The characteristics of the 40 commercially produced foods for general consumption commonly fed to children under the age of two years included in the study are shown in Table 5-1.

Ninety percent of the products in the sample were shelf stable and 10% were fresh. Eight sub-categories of food products were included in the sample: biscuits/cookies (15%), cakes/sponge cake (8%), candy/sweets/chocolate (18%), chips/crisps (8%), yoghurt (5%), soft drinks (3%), other sweetened beverages (13%) and other snacks (country-specific products such as instant noodles, puffed rice mixes, masala coated peas and others) (33%).

Fifty-eight percent of the products were locally produced, in Nepal, 30% were imported from India, 5% from Vietnam and 3% originated from Malaysia and Germany respectively (see Table 5-2). The products were manufactured by 29 different companies (see Figure 5-1) and represented 38 different brands (see Figure 5-2). Due to the sampling methods employed in this study, it is recognized that the sample is not representative of the entire category of commercially produced foods for general consumption commonly fed to children under the age of two years in Nepal but is an indication of some of the brands and manufacturers in this product category.

Table 5-1 Characteristics of the commercially produced foods for general consumption commonly fed to children under the age of two years included in the study in Nepal (n=40).

Product characteristics	Number of products	Percentage of products (%)
Product origin:		
Locally manufactured products	23	58
Imported products	16	40
Unclear	1	2
Product category:		
Biscuits/cookies	6	15
Cakes/sponge cake	3	8
Candy/sweets/chocolate	7	18
Chips/crisps	3	8
Yogurt	2	5
Soft drinks	1	3
Other sweetened beverages	5	13
Other snacks (country specific products: instant noodles, puffed rice mixes, masala coated peas and other)	13	33
Storage:		
Shelf stable	36	90
Fresh	4	10

Table 5-2 Country of origin of the commercially produced foods for general consumption commonly fed to children under the age of two years included in the study in Nepal.

Country of origin	Number of products	Percentage of products (%)
India	12	30
Nepal	23	58
Vietnam	2	5

Other countries of origin which featured once each included Malaysia, Germany and one that was unclear.

Figure 5-1 Manufacturers represented in the commercially produced foods for general consumption commonly fed to children under the age of two years included in the study in Nepal (n=29).

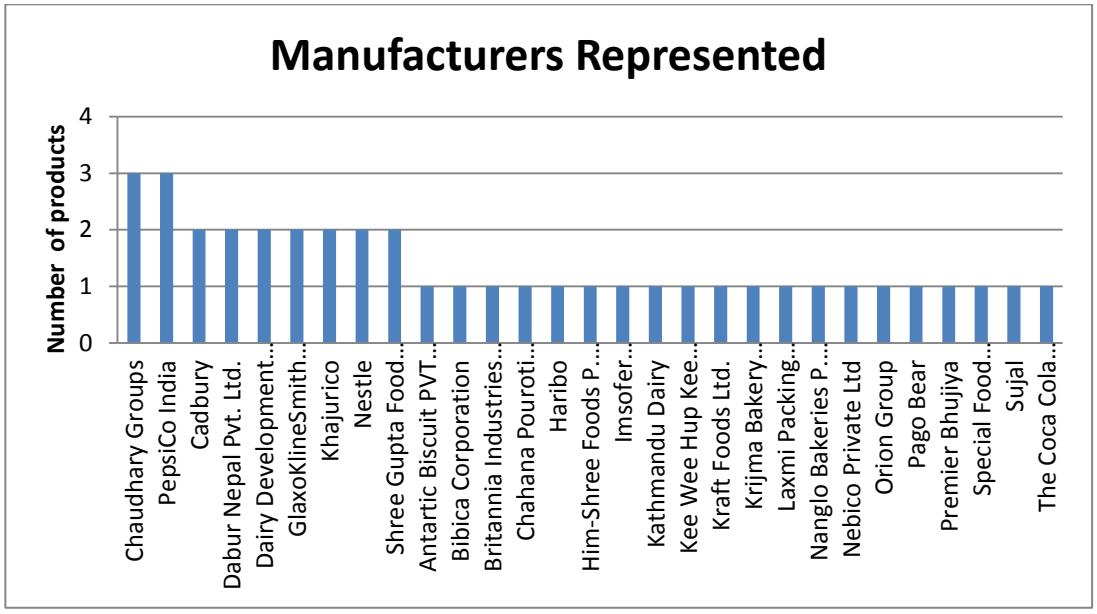


Figure 5-2 Brands represented as commercially produced foods for general consumption commonly fed to children under the age of two years included in the study in Nepal (n=38).

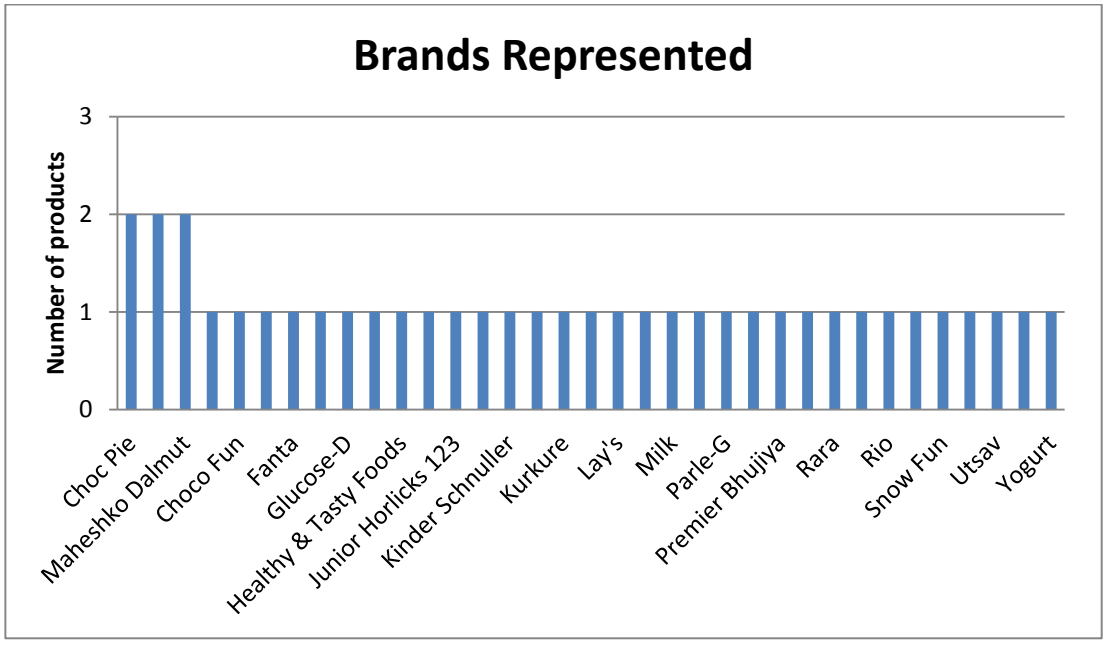


Table 5-3 provides information on the cost of the products per 100g and per serving size. The product serving sizes were calculated based on the amount/volume which should provide approximately 100 kcal or half the daily energy requirement from complementary food of the breastfed child 6 – 8 months.

Table 5-3 Costs of commercially produced foods for general consumption commonly fed to children the age of two years included in the study in Nepal per unit (g) and mean cost per serving by product category (n=40) are presented in two currencies [Nepalese Rupee (NPR) and United States Dollar (USD)].

Product category	Mean cost per 100g (Lowest cost – Highest cost)	Mean cost/serving (Lowest cost - Highest cost)[a]
Biscuits/cookies		
All products (n=5)		
NPR	39.41 (13.33 – 113.33)	8.1 (2.89-22.67)
USD	0.41 (0.14-1.18)	0.08 (0.03-0.24)
Imported products (n=3)		
NPR	55.3 (24.00-113.33)	11.28 (4.82-22.67)
USD	0.57 (0.25-1.17)	0.11 (0.05-0.24)
Locally manufactured products (n=2)		
NPR	15.6 (13.33-17.86)	3.34 (2.89 – 3.78)
USD	0.16 (0.13-0.18)	0.03 (0.03-0.04)
Cakes/sponge cake		
All products (n=3)		
NPR	54.12 (23.07-71.43)	37.07 (14.62-59.52)
USD	0.56 (0.24-0.74)	0.39 (0.15-0.52)
Imported products (n=0)		
Locally manufactured products (n=2)		
NPR	15.59 (13.33-17.85)	3.34 (2.89-3.78)
USD	0.16 (0.03-0.18)	0.03 (0.03-0.04)
Candy/sweets/chocolate		
All products (n=7)		
NPR	117.6 (15.15-275.00)	34.3 (22.15-53.51)
USD	1.22 (0.15-2.86)	0.36 (0.23-0.55)
Imported products (n=5)		
NPR	153.91 (76.00-275.00)	34.3 (22.15-53.51)
USD	1.60 (0.79-2.86)	0.36 (0.23-0.55)
Locally manufactured products (n=1)		
NPR	38.45	
USD	0.40	
Chips/crisps		
All products (n=3)		
NPR	75.94 (60.00-90.90)	14.2 (12.26-16-19)
USD	0.78 (0.62-0.95)	0.15 (0.13-0.17)
Imported products (n=2)		
NPR	83.91 (76.92-90.91)	15.16 (14.13-16.19)
USD	15.16 (14.14-16.19)	0.16 (0.15-0.17)

Product category	Mean cost per 100g (Lowest cost – Highest cost)	Mean cost/serving (Lowest cost - Highest cost)[a]
Locally manufactured products (n=1)		
NPR	60	12.26
USD	0.62	0.13
Yogurt		
All products (n=2)		
NPR	10.5 (9.00-12.00)	
USD	0.11 (0.09-0.12)	
Imported products (n=0)		
Locally manufactured products (n=2)		
NPR	10.5 (9.00-12.00)	
USD	0.11 (0.09-0.12)	
Soft drinks		
All products (n=1)		
NPR	12.00	21.42
USD	0.12	0.22
Imported products (n=0)		
Locally manufactured products (n=1)		
NPR	12	21.42
USD	0.12	0.22
Other sweetened beverages (n=5)		
All products (n=5)		
NPR	24.72 (11.00-55.11)	17.56 (7.86-24-99)
USD	0.26 (0.11-0.57)	0.18 (0.08-0.26)
Imported products (n=2)		
NPR	34.64 (14.17-55.11)	18.31 (14.13-22.49)
USD	0.36 (0.15-0.57)	0.19 (0.15-0.23)
Locally manufactured products (n=3)		
NPR	18.11 (11.00-28.33)	17.07 (7.86-24.99)
USD	0.19 (0.11-0.29)	0.17 (0.08-0.26)
Other snacks (e.g. instant noodles, puffed rice, masala coated peas, etc.)		
All products (n=13)		
NPR	27.88 (3.75-65.80)	9.81 (4.00-16.95)
USD	0.29 (0.04-0.68)	0.1 (0.06-0.18)
Imported products (n=3)		
NPR	51.67 (32.00-65.80)	13.26 (7.95-16.96)
USD	0.54 (0.33-0.68)	0.13 (0.08-0.18)
Locally manufactured products (n=9)		
NPR	20.82 (3.75-60.61)	7.56 (4.14-10.99)
USD	0.22 (0.04-0.63)	0.08 (0.04-0.11)

[a]A serving size was calculated to provide 100 kcal which is approximately half the daily energy requirement from complementary food of the breastfed child 6-8 months of age.

A cost comparison was undertaken to assess price differences per 100kcal portion between commercially produced complementary cereal products and commercially produced foods for general consumption commonly fed to children under the age of two years. Table 5-4 shows that overall locally manufactured products tended to be cheaper than imported products. Furthermore commercially produced foods for general consumption commonly fed to children under the age of two years were on average more expensive than commercially produced complementary foods cereals/porridges and this was the case for both locally produced and imported products. A commercially produced complementary food cereal/porridge portion cost 50% less than an average commercially produced food for general consumption commonly fed to children under the age of two years. Interestingly locally produced commercially produced foods for general consumption commonly fed to children under the age of two years were almost the same price as locally produced commercially produced complementary cereal/porridges, which may be a factor for a mother/caregiver when deciding on which food to purchase for their infant or young child. Beverages were assessed separately and as per the other categories, imported products were twice the price of locally produced beverages.

Geniez et al. (2014) conducted a study in Nepal to assess the affordability of a nutritious diet[2] which consists of adequate energy, fat, protein and 13 additional micronutrients. It was estimated that in the Kathmandu Valley region to obtain a nutritious diet, NPR 22945.00 /person/year is required. When one considers the approximate annual cost of the foods cited in Table 5-4 (conservatively estimated as 1 portion per day multiplied by 7 days/ week and 52 weeks respectively), the cereals account for 10% and 20% of the annual budget for a nutritious diet, for local and imported products respectively. Commercially produced foods for general consumption commonly fed to children under the age of two years (excluding beverages) would account for 39% of the estimated budget if using imported products and 10% if using locally produced products. This highlights the need to assess the nutritional quality of the products available for feeding of infants and young children, especially if they consume a relatively high proportion of a family's food budget.

Table 5-4 Cost comparison between commercially produced complementary cereals/porridges, commercially produced foods for general consumption commonly fed to children under the age of two years (excluding beverages) and beverages in Nepal.

Product origin	Currency	Commercially produced complementary cereals/ porridge	Commercially produced foods for general consumption commonly fed to children <2 years of age: foods combined (excluding beverages)	Commercially produced foods for general consumption commonly fed to children <2 years of age: beverages
Locally produced	**NPR**	6.11 (4.75 – 9.38)[a]	6.57 (2.89 – 12.26)[c]	9.62 (7.32 – 11.60)[e]
	USD	0.06 (0.05 – 0.10)	0.68 (0.30 – 0.12)	0.1 (0.08 – 0.12)
Imported products	**NPR**	12.28 (4.75 – 22.5)[b]	24.40 (4.82 – 59.52)[d]	18.31 (14.13 – 22.49)[f]
	USD	0.13 (0.05 – 0.23)	0.25 (0.05 – 0.62)	0.19 (0.15 – 0.23)

[a]n=8; [b]n=13; [c]n=7, [d]n=14; [e]n=4; [f]n=2

[2] A nutritious diet is calculated to provide the cost (based on local current market prices) of a theoretical nutritious diet for a 'reference family' consisting of one breast-fed child 12-24 months of age, one child 11-12 years, one child 16-17 years, one adult and women aged 30-59 years and who are moderately active.

5.2 Summary of answers to commercially produced foods for general consumption commonly fed to children under the age of two years checklist questions and data generated from labels database

The results of the labeling practices checklist together with data generated from the labels database, which documents commercially produced foods for general consumption commonly fed to children under-2 years labeling practices in Nepal, are presented in Table 5-5.

The primary aim of the creation of a checklist for commercially produced foods for general consumption commonly fed to children under the age of two years, was to objectively identify products which claimed to be suitable for children under the age of two years. This is illustrated by the inclusion of the following questions: C1-C24; C26 and C31.

Table 5-5 Nepal checklist results: Commercially produced foods for general consumption commonly fed to children under the age of two years labeling practices (n=40).

Checklist of labeling practices		Potential answers	Number of labels	Percentage of labels
C1.	Does the product label specify a recommended age/age range for use that is >/=24 months?	Yes	2	5
		No	38	95
C2.	Does the product label include phrases such as “from the start”; “for the whole family” or “first stage”?	Yes	2	5
		No	38	95
C3.	Does the product label contain any words or a product description that indicate that it is suitable for a child?	Yes	9	23
		No	31	77
C4.	Does the product label show an image of babies or children? (that appear to be under 2 years old)	Yes	0	
		No	1	25
		Unclear	3	75
		NA	36	
C5.	Does the product label recommend feeding the product from a feeding bottle?	Yes	0	0
		No	40	100
C6.	Does the product label show an image of a feeding bottle?	Yes	0	0
		No	40	100
C7.	Does the product label show an image of a real person, such as a celebrity or sport’s star, that has appeal to children?	Yes	1	3
		No	39	97
C8.	Does the product label show an image of a cartoon character or fictional movie character that has appeal to children?	Yes	2	5
		No	38	95
C9.	Does the product label show an image of a brand mascot that has specific appeal to children?	Yes	2	5
		No	38	95
C10.	Does the product label contain any representation of fantasy or adventure themes that has appeal to children?	Yes	3	8
		No	37	92
C11.	Does the product label contain information about or an image of a free gift, toy or collectible item with appeal to children?	Yes	4	10
		No	36	90
C12.	Does the product label show an image of a toy?	Yes	2	5
		No	38	95
C13.	Are any colors, shapes or designs used on the product label that has particular appeal to children?	Yes	8	20
		No	32	80
C14.	Does the product label contain or refer to a competition, voucher or game with appeal to children?	Yes	3	8
		No	37	92
C15.	Does the product label contain a joke, rhyme or short story with appeal to children?	Yes	2	5
		No	38	95
C16.	Does the product packaging have a particular shape, or does the product label show that the food contained has a particular shape, that has appeal to children?	Yes	6	15
		No	34	85
C17.	Does the product have a physical appearance, texture or any	Yes	1	3

Checklist of labeling practices		Potential answers	Number of labels	Percentage of labels
	other novelty (not identified from any other questions) that would have specific appeal to children?	No	39	97
C18.	Does the product label indicate a flavor that would specifically appeal to children?	Yes	2	5
		No	38	95
C19.	Are there any emotive claims (e.g. implying "fun") or statements on the product label that are directed towards children or their caregivers?	Yes	7	18
		No	33	82
C20.	Does the product label indicate that the product is portioned in, for example, "mini" or "bite size" portions?	Yes	1	3
		No	39	97
C21.	Does the product label indicate that the product can be adapted to be suitable for a child?	Yes	1	3
		No	39	97
C22.	Does any information on the product label imply that a balanced and varied diet cannot provide adequate nutrients to growing children?	Yes	2	5
		No	38	95
C.23	Does the product label include warnings that are specifically intended for children?	Yes	5	13
		No	35	87
C24.	Is the product labeled in a way that also promotes the company's breast-milk substitutes or complementary foods by using similar (a) Color schemes or designs, (b) Names, (c) Slogans, mascots, logos or other symbols, as used for breast-milk substitutes/complementary food brands?	Yes	1	50
		No	1	50
		NA[a]	38	
C25.	Does the product label include a portion / serving size?	Yes	9	23
		No	31	78
C26.	Does the product label provide nutrition information as a percentage RDA/NRV/GDA for children younger than 2 years of age?	Yes	0	0
		No	40	100
C27.	Does the product label make any nutrient content claims?	Yes	9	23
		No	31	77
C28.	Does the product label make any nutrient comparative claims?	Yes	1	3
		No	39	97
C29.	Does the product label make any nutrient function/other function claims?	Yes	9	23
		No	31	78
C30.	Does the product label make any reduction of disease risk claims?	Yes	1	3
		No	39	97
C31.	Does the product label make any other claims (excluding nutrition/health claims) that imply suitability for a child?	Yes	1	3
		No	39	97
C32.	Is the product label written in the appropriate language(s) of the country in which the product is sold?	Yes	38	95
		No	2	5
C33	Does the product label include the following:			
C33.1	Ingredients list?	Yes	33	82
		No	7	18
C33.2	The nutrition composition/analysis of the product?	Yes	27	68
		No	13	32
C33.3	Batch number?	Yes	36	90
		No	4	10
C33.4	Best before date?	Yes	36	90
		No	4	10
C34	Is there an invitation on the label to make contact (direct or indirect) with the company's marketing personnel?	Yes	8	20
		No	32	70

5.3 Labeling practices of commercially produced foods for general consumption commonly fed to children under the age of two years

As the inappropriate promotion of foods fed to infant and young children is under the spotlight in WHA resolution 65.6, in order to ensure optimal infant and young child feeding, it was considered important for this study to also consider the category of commercially produced foods for general consumption commonly fed to children under the age of two years. For optimal feeding, it is important to ensure that restrictions on the promotion of appropriately formulated commercially produced complementary foods, such as those developed according to the Codex Alimentarius 'Guidelines on Formulated Complementary Foods for Older Infants and Young Children', do not result in mothers/caregivers selecting commercially produced foods for general consumption commonly fed to children under the age of two years of a poor nutritional quality, since there are fewer guidelines governing their promotion that may lead to the belief that such products are suitable for and perhaps even beneficial (if they make nutrition and health claims) to infants and young children. Furthermore, consideration also needs to be given to the possibility that restrictions on promotion of appropriately formulated commercially produced complementary foods, may result in manufacturers removing the age recommendation for their products so as not to fall into the 'infant' (person under the age of 12 months) and more specifically 'young child' (person under 24 months of age) category and therefore being able to promote their products.

The STAG Technical Paper on *'Definition of inappropriate promotion of foods for infants and young children'* states that 'there is recognition that some processed foods and drinks that are promoted for the general population may be consumed by infants and young children. These products were not included in the context of foods intended for infants and young children' (WHO, 2013a). Thus this report did not assess the labeling practices of commercially produced foods for general consumption commonly fed to children under the age of two years according to the WHO STAG criteria for the inappropriate promotion of foods for infants and young children.

As discussed in the methods section of this report, since there is no formal guidance for the marketing of this group of products, the structure of the commercially produced foods for general consumption commonly fed to children under the age of two years labeling practices checklist (see Appendix E) was based on the commercially produced complementary foods checklist and adapted to include the principles of international guidance available on the marketing of foods and beverages to children (WHO, 2004; CI, 2008; WHO, 2010; IASO, 2012). In so doing, the aim was to determine whether there was anything on the product label that could possibly encourage a mother/caregiver to feed the product to an infant or child younger than two years of age, even though there was no such explicit recommendation on the product. This report describes labeling practices on the strategically selected commercially produced foods for general consumption commonly fed to children under the age of two years that could potentially indicate to a mother/caregiver that the product was suitable for a child under-2 years of age. The checklists were, as far as was possible, completed from a mother/caregivers perspective.

5.3.1 Languages

It is generally accepted by authoritative bodies such as Codex Alimentarius that the information and instructions on product labels should be clear and correct, and in the appropriate language of the country (Codex, 1985). It is noted from the 2011 National Population and Housing Census for Nepal for the Kathmandu district that only 0.04% of the female population have English as their mother language and 1.7% have English as their second language (Census, 2011).

Ninety-five percent of products in the sample contained text in the Nepali or English language which is in accordance with local legislation (Question C33, Table 5-5). Further analysis of the languages found on the 40 commercially produced foods for general consumption commonly fed to children under the age of two years included in this study showed that 70% of the labels were all in English and 8% were all in Nepali. Eighteen percent of the labels provided information in both Nepali and English. Further information of the languages found on the labels is presented in Table 5-6.

Table 5-6 Languages in which label information was provided on selected commercially produced foods for general consumption commonly fed to children under the age of two years in Nepal (n=40).

Label information provided in the following language(s)	ALL information provided in:		SOME information provided in:	
	Number of labels	Percentage of labels	Number of labels	Percentage of labels
Nepali	3	8	8	20
English	28	70	2	5
Other	1	3	1	3
Nepali & English	7	18	-	-
Missing (no text)	1	3	29	73

5.3.2 Mandatory and other label information

It is a globally accepted best practice for all food labels to provide certain information including an ingredients list and traceability (Codex, 1985). The study found that 82% of labels provided an ingredients list, 87% gave a batch number, 90% stated the best before date and 68% of the labels also provided the nutrition composition/analysis of the product (Questions C33.1 – C33.4 respectively, Table 5-5). Five (12.5%) products were purchased past their best before dates and a further four (10%) products contained illegible/unclear expiry dates.

It is interesting to note that one product, a sucker sweet, had no label information (see Figure 5-3 A) and another product contained a piece of paper inside of the packet, stating the product name/descriptor and manufacturer details but giving no further information (see Figure 5-3 B).

Figure 5-3 The packaging of 2 commercially produced foods for general consumption commonly fed to children under the age of two years in Nepal.

A B

5.3.3 Age related recommendations, feeding instructions and phrases

Five percent of products included in the sample indicated that they were suitable for use for children 24 months or older, and 23% percent of all the labels indicated that the product was suitable for a child (Questions C1 and C3 respectively, Table 5-5). Five percent of labels had an indication that the product was suitable for all ages by denoting one of the following terms: "from the start"; "for the whole family" or "first stage" (Question C2, Table 5-5).

None of the labels had an 'age of introduction' but 23% of labels which contained information that indicated that the product was suitable for a child, used the following wording examples: "*Ben 10 Collect Alien superhero token on back of pack. CN Cartoon Network [on front of pack]*" and "*Go ahead, quench your kids' thirst with a refreshing glass of [product name] everyday!*" Two product labels contained phrases which implied 'use < 6 months' - "*Little Baby Fish*" and "*Stage 1*".

None of the products compared themselves to breast milk.

5.3.4 Preparation and use instructions

When a product contained preparation/use information/instructions (n=12), 33% stated 'add boiling water steep/cook on hot stove', 33% contained mixing: 'milk or water' and 33% contained 'other' serving suggestions, see Table 5-7 for all preparation and use instructions.

Table 5-7 Preparation and use instructions used on commercially produced foods for general consumption commonly fed to children under the age of two years in Nepal (n=12).

Categories of Preparation / Use instructions	Number of labels	Percentage of labels
Prep: Add boiling water steep/cook on hot stove	4	33
Serving suggestions: Other[a]	4	33
Mixing: Milk or water	4	33
Prep: Shake before use	3	25
Prep: Stir before use	2	17
Add: Sugar / fruit juice / honey	2	17
Add milk [hot or cold]	1	8

[a]Examples of 'Serving suggestion: Other' found on the labels of instant noodles product were "*Make your noodles more nutritious and delicious by adding paneer/vegetables.*" / "*Add the chicken seasoning powder from the sachet provided*"

It is noted that the preparation suggestion to add vegetables could be considered an appropriate message, however the suggestion to add seasoning powder may not be appropriate, since seasoning powders are generally high in sodium, and instant noodles already contain a significant amount of sodium (900mg per serving).

One of the preparation and use instructions described that consumers should *"Enjoy the biscuit by dipping it in milk".* This instruction could be considered to imply suitability for young children, since the dipping of a biscuit in milk would soften the biscuit and mothers/caregivers could therefore assume this to be a more suitable texture for a young child than other biscuits. On the other hand, one could then consider that all soft commercially produced foods for general consumption commonly fed to children under the age of two years in Nepal would be considered suitable for young children. This highlights the difficulty in assessing the information contained on these products and research on mothers/caregivers interpretation of these types of comments, as they relate to suitability for feeding to young children, would be valuable.

An already sweetened product (containing 29.7g of sugar per 100g of powder) included an instruction to prepare "*with just as much sugar as you like*". This is may be considered inappropriate, considering the current concerns regarding the global obesity epidemic.

5.3.5 Storage instructions

Fifty-eight percent (n=23) of the labels in the sample included storage instructions. The two most common instructions referred to ‘general storage’ (53%) and ‘storage conditions to avoid’ (32%). Less common instructions included those pertaining to 'Storage before opening' (7%); 'General length of storage' (13%); 'Length of storage after opening' (5%); 'Storage after opening' (2%).

5.3.6 Warnings

One-quarter (n=10) products contained warnings on the product labels with the most frequent one pertaining to ‘age related warnings’ (50%) or ‘bacterial contamination’ (40%), followed by temperature (10%); safety concerns (20%) and a warning regarding not to use product as a milk substitute (10%). Five labels (12.5%) provided warnings that were specifically intended for children (Question C22, Table 5-5 and Figure 5-4 respectively).

Figure 5-4 Example of warnings that make specific age recommendations on selected commercially produced foods for general consumption commonly fed to children under the age of two years in Nepal.

- *NOT RECOMMENDED FOR INFANTS BELOW 12 MONTHS*
- *Not fit for consumption by infants below 12 months*

Both of the above warnings imply that the product could possibly be consumed from 12-24 months.

There was one product that contained the following warning “*This product is not an infant milk substitute or infant food for less than 2 years old.”* In addition however the product does state that it is suitable as an ‘infant milk substitute from after two years of age.’

5.3.7 Safety messages

Five percent of product labels contained safety messages, of which, one advised to feed the product in a cup and the other advised washing hands before use.

5.3.8 Nutrient composition

Nutrient composition data from the labels of commercially produced foods for general consumption commonly fed to children under the age of two years are presented in Table 5-8. Product labels have been grouped according to the various product categories. The 100g nutrient content information found on the label was then calculated as a 100kcal serving. The last column of the table presents the calculated percentage of DRI/RNI or WHO recommendations in each 100kcal serving. Further details on how the DRI/RNI per 100kcal portion was calculated can be found in Appendix G.

Seventy percent of the labels provided nutritional information and of those which did, the information provided was inconsistent and thus prevents equal comparisons from being made. However the general trend, with the exception of the beverages, based on the information provided is that they were relatively low in protein, high in sugar and high in fat with correspondingly low levels of micronutrients. This is indicative of what is generally considered to be the case for ‘energy dense snack’ products. Nutrient quantity and quality (of macronutrients and micronutrients) is critical for optimal infant and young child feeding. Thus energy dense snack products may not be suitable for infants and young children.

The assessment of the actual nutrient composition (in comparison to the nutrient composition declared on the label) and associated quality of the products were not included in the scope of this research. However for a description of the prevalence of nutrition content claims in this groups of products see section 5.3.15.

Table 5-8 Nutrient composition of commercially produced foods for general consumption commonly fed to children under the age of two years in Nepal (n=27).

Nutrient	100 g Mean (minimum – maximum)	100 kcal Mean (minimum – maximum)	% DRI/RNI per 100 kcal[a]		
			6 – 8 months	9 – 11 months	12 – 23 months
Biscuits/cookies					
Energy (kJ) (n = 5)	1975 (1883 – 2092)	418 (418 – 419)	-		
Energy (kcal) (n = 5)	472 (450 – 500)	100 (100 – 100)	50	33	18
Protein (g) (n = 5)	7.0 (6.4 – 8.2)	1.5 (1.4 – 1.8)	17	18	17
Carbohydrates (g) (n= 5)	73.7 (68 – 78.2)	15.7 (13.6 – 17.3)	68 – 87	46 – 60	25 – 33
Sugar[b] (g) (n = 3)	26.8 (25.0 – 29.1)	5.6 (5.0 – 5.9)	112		
Dietary fibre (g) (n = 3)	0.4 (0.0 – 0.7)	0.1 (0 – 0.2)	-		
Total fat (g) (n = 5)	16.3 (12.2 – 22.1)	3.4 (2.7 – 4.4)	28 – 34	19 – 23	10 – 12
SFA (g) (n = 2)	9.5 (8.0 – 11)	1.9 (1.6 – 2.2)	-		
MUFA (g)	-	-	-		
PUFA (g)	-	-	-		
Trans FA (g)	-	-	-		
LA (g)	-	-	-		
ALA (g)	-	-	-		
Vitamin A (µg RE)	-	-	-		
Vitamin A (IU)	-	-	-		
Sodium (mg) (n = 2)	95.0 (14.0 – 176.0)	19.0 (2.8 – 35.2)	5		
Calcium (mg) (n = 1)	58.3 (58.3 – 58.3)	11.7 (11.7 – 11.7)	3	3	2
Iron (mg) (n = 1)	2.4 (2.4 – 2.4)	0.5 (0.5 – 0.5)	6	6	8
Zinc (mg)	-	-	-		
Cakes/sponge cake					
Energy (kJ) (n=2)	1222 (502 – 1941)	418 (418 – 418)	-		
Energy (kcal) (n=2)	292 (120 – 464)	100 (100 – 100)	50	33	18
Protein (g) (n=2)	2.3 (1 – 3.6)	0.8 (0.8 – 0.8)	9	10	9
Carbohydrates (g) (n=2)	45.2 (19.0 – 71.4)	15.6 (15.4 – 15.8)	68 - 87	46 - 60	25 – 33
Sugar[b] (g) (n=2)	10.5 (10.0 – 11.0)	5.4 (2.4 – 8.3)	108		
Dietary fibre (g) (n=1)	0.3 (0.3 – 0.3)	0.1 (0.1 – 0.1)	-		
Total fat (g) (n=2)	11.2 (4.5 – 17.9)	3.8 (3.8 – 3.9)	32 - 38	21 - 25	11 - 14
SFA (g) (n=2)	6.4 (2 – 10.7)	2.0 (1.7 – 2.3)	-		
MUFA (g)	-	-	-		
PUFA (g)	-	-	-		
Trans FA (g) (n=1)	3.2 (3.2 – 3.2)	0.7 (0.7 – 0.7)	-		
LA (g)	-	-	-		
ALA (g)	-	-	-		
Vitamin A (µg RE)	-	-	-		
Vitamin A (IU)	-	-	-		
Sodium (mg) (n=1)	65.0 (65.0 – 65.0)	54.2 (54.2 – 54.2)	15		
Calcium (mg)	-	-	-		
Iron (mg)	-	-	-		
Zinc (mg) (n=1)	-	-	-		
Candy/sweets/chocolate					
Energy (kJ) (n=5)	1840 (1459 – 2276)	420 (418 – 425)	-		
Energy (kcal) (n=5)	439 (343 – 544)	100 (100 – 100)	50	33	18
Protein (g) (n=5)	5.8 (3.2 – 8.1)	1.4 (0.7 – 2.0)	16	17	16
Carbohydrates (g) (n=5)	65.7 (55.0 – 77.4)	15.6 (10.1 – 22.6)	68 - 87	46 - 60	25 – 33
Sugar[b] (g) (n=5)	47.7 (28.9 – 60.2)	11.2 (6.2 – 15.1)	224		
Dietary fibre (g) (n=1)	0.1 (0.1 – 0.1)	0.03 (0.03 – 0.03)	-		
Total fat (g) (n=5)	16.9 (0.1 – 32.4)	3.6 (0.0 – 6.0)	30 - 36	20 - 24	11 - 13
SFA (g)	-	-	-		
MUFA (g)	-	-	-		
PUFA (g)	-	-	-		

Nutrient	100 g Mean (minimum – maximum)	100 kcal Mean (minimum – maximum)	% DRI/RNI per 100 kcal[a]		
			6 – 8 months	9 – 11 months	12 – 23 months
Trans FA (g) (n=1)	0.03 (0.03 – 0.03)	0.006 (0.006 – 0.006)	-		
LA (g)	-	-	-		
ALA (g)	-	-	-		
Vitamin A (µg RE)	-	-	-		
Vitamin A (IU)	-	-	-		
Sodium (mg) (n=1)	0.03 (0.03 – 0.03)	0.009 (0.009 – 0.009)	0.003		
Calcium (mg) (n=1)	210 (210 – 210)	38.6 (38.6 – 38.6)	10	10	8
Iron (mg)	-	-	-		
Zinc (mg)	-	-	-		
Chips/crisps					
Energy (kJ) (n=3)	2223 (2046 – 2347)	418 (418 – 418)	-		
Energy (kcal) (n=3)	531 (489 – 561)	100 (100 – 100)	50	33	18
Protein (g) (n=3)	6.8 (6.4 – 7.0)	1.3 (1.1 – 1.4)	15	15	15
Carbohydrates (g) (n=3)	58.8 (53.6 – 68.0)	11.2 (9.6 – 13.9)	49 - 62	33 - 43	18 – 23
Sugar[b] (g) (n=2)	5.3 (3.0 – 7.6)	1.0 (0.5 – 1.4)	20		
Dietary fibre (g)	-	-	-		
Total fat (g) (n=3)	29.9 (21 – 35.7)	5.6 (4.3 – 6.4)	47 - 56	31 - 37	16 - 20
SFA (g) (n=1)	11.4 (11.4 – 11.4)	2.3 (2.3 – 2.3)	-		
MUFA (g) (n=1)	7.7 (7.7 – 7.7)	1.6 (1.6 – 1.6)	-		
PUFA (g) (n=1)	2.0 (2.0 – 2.0)	0.4 (0.4 – 0.4)	13	8	4
Trans FA (g)	-	-	-		
LA (g)	-	-	-		
ALA (g)	-	-	-		
Vitamin A (µg RE)	-	-	-		
Vitamin A (IU)	-	-	-		
Sodium (mg)	-	-	-		
Calcium (mg)	-	-	-		
Iron (mg)	-	-	-		
Zinc (mg)	-	-	-		
Soft drinks (n=1)					
Energy (kJ) (n=1)	234 (234 – 234)	418 (418 – 418)	-		
Energy (kcal) (n=1)	56 (56 – 56)	100 (100 – 100)	50	33	15
Protein (g) (n=1)	-	-	-		
Carbohydrates (g) (n=1)	14.0 (14.0 – 14.0)	25.0 (25.0 – 25.0)	109 - 139	74 - 96	40 - 52
Sugar[b] (g)	-	-	-		
Dietary fibre (g)	-	-	-		
Total fat (g)	-	-	-		
SFA (g)	-	-	-		
MUFA (g)	-	-	-		
PUFA (g)	-	-	-		
Trans FA (g)	-	-	-		
LA (g)	-	-	-		
ALA (g)	-	-	-		
Vitamin A (µg RE)	-	-	-		
Vitamin A (IU)	-	-	-		
Sodium (mg)	-	-	-		
Calcium (mg)	-	-	-		
Iron (mg)	-	-	-		
Zinc (mg)	-	-	-		
Other sweetened beverages					
Energy (kJ) (n=5)	781 (251 – 1631)	418 (418 – 419)	-		
Energy (kcal) (n=5)	186.6 (60 – 390)	100 (100 – 100)	50	33	18
Protein (g) (n=5)	0.22 (0 – 1)	0.4 (0.0 – 1.7)	4	5	5
Carbohydrates (g) (n=5)	47.14 (15 – 100)	25.1 (24.9 – 25.6)	109 - 139	74 - 97	40 - 52

Nutrient	100 g Mean (minimum – maximum)	100 kcal Mean (minimum – maximum)	% DRI/RNI per 100 kcal[a]		
			6 – 8 months	9 – 11 months	12 – 23 months
Sugar[b] (g) (n=2)	52.5 (14.9 – 90)	24.3 (23.7 – 25.0)	972		
Dietary fibre (g)	-	-	-		
Total fat (g)	-	-	-		
SFA (g)	-	-	-		
MUFA (g)	-	-	-		
PUFA (g)	-	-	-		
Trans FA (g)	-	-	-		
LA (g)	-	-	-		
ALA (g)	-	-	-		
Vitamin A (µg RE) (n=2)	811 (400 – 1222)	490 (313.3 – 666.7)	123		
Vitamin A (IU)	-	-	-		
Sodium (mg)	-	-	-		
Calcium (mg) (n=4)	130.8 (5 – 333)	41.5 (8.3 – 85.4)	10		8
Iron (mg) (n=3)	4.7 (0.2 – 13.3)	1.5 (0.3 – 3.4)	17		25
Zinc (mg)	-	-	-		
Nepal specific snacks[c]					
Energy (kJ) (n=6)	1889 (1610 – 2305)	418 (418 – 418)	-		
Energy (kcal) (n=6)	452 (385 – 551)	100 (100 – 100)	50	33	18
Protein (g) (n=6)	12.1 (9.2 – 15.7)	2.7 (2.1 – 3.9)	30	32	31
Carbohydrates (g) (n=6)	68.3 (58.9 – 80)	15.5 (12.3 – 20.8)	67 - 86	46 - 60	25 – 32
Sugar[b] (g) (n=5)	16.6 (0.1 – 47.2)	3.6 (0.0 – 8.6)	72		
Dietary fibre (g) (n=5)	1.0 (0.8 – 1.1)	0.2 (02 – 0.2)	-		
Total fat (g) (n=2)	12.5 (2.7 – 22.1)	2.7 (0.7 – 4.4)	23 - 27	15 - 18	8 - 10
SFA (g) (n=2)	6.1 (2.5 – 9.7)	1.3 (0.6 – 1.9)	-		
MUFA (g) (n=2)	5 (1.2 – 8.8)	1.0 (0.3 – 1.8)	-		
PUFA (g) (n=2)	1.25 (0.5 – 2)	0.3 (0.1 – 0.4)	10	6	3
Trans FA (g) (n=2)	0.35 (0 – 0.7)	0.1 (0.0 – 0.1)	-		
LA (g)	-	-	-		
ALA (g)	-	-	-		
Vitamin A (µg RE) (n=2)	537 (333 – 741)	139.1 (85.8 – 192.5)	35		
Vitamin A (IU) (n=1)	400 (400 – 400)	80 (80 – 80)	-		
Sodium (mg) (n=2)	73.4 (1.7 – 145)	19.0 (0.4 – 37.7)	5		
Calcium (mg) (n=5)	377.3 (19.3 – 833.3)	95.5 (4.0 – 214.8)	24	24	19
Iron (mg) (n=3)	18.8 (2.0 – 35.0)	4.8 (0.4 – 9.1)	53	53	80
Zinc (mg) (n=2)	3.8 (3.4 – 4.2)	1.1 (0.9 – 1.1)	27		

[a] Recommendations & references used can be found in Appendix G.

[b] Sugar values were captured from any mention of sugar in the nutritional information on the label and not specifically added sugar. Currently there are no guidelines for recommendation on the proportion of sugar from total energy for those aged <24 months however since sugar is under scrutiny, a cut-off for those >24 months was used: Total sugars should not exceed 5.0 gr / 100 gr of solid food or 2.5 gr / 100 ml of beverage (PAHO 2011).

[c] A category such as this includes a wide range of products (such as instant noodles, puffed rice and masala coated peas) and care should be taken to not assume that all Nepali Specific Snacks would have this nutrient profile.

5.3.9 Portion size and daily ration

Nine of the commercially produced foods for general consumption commonly fed to children under the age of two years provided portion sizes or daily rations (Question C25, Table 5-5).

5.3.10 Consistency

None of the commercially produced foods for general consumption commonly fed to children under the age of two years contained an image of a feeding bottle nor did any of the product labels recommend feeding the product from a feeding bottle (Questions C5 and C6, Table 5-5).

5.3.11 Cross-promotion with a breast-milk substitute

Two of the commercially produced foods for general consumption commonly fed to children under the age of two years were produced by manufacturers that produced both breast-milk substitutes and complementary foods (Question C24, Table 5-5). Of these two products, one of the labels had a resemblance to the breast-milk substitute as a result of the product color schemes/ designs, names and/or slogans/ mascots/ other symbols. See Figure 5-5 which demonstrates what could be classified as cross-promotion, whereby the commercially produced complementary food and commercially produced food for general consumption both display the manufacturer name surrounded by the shape of a heart.

Figure 5-5 Example of cross-promotion between a commercially produced complementary food and commercially produced food for general consumption in Nepal.

Commercially produced complementary food

Commercially produced food for general consumption

5.3.12 Branded ingredients

Two of the commercially produced foods for general consumption commonly fed to children under the age of two years contained branded ingredients: "*[Branded ingredient] is a source of Vitamin A & C, Vitamin B2, B3, B6, Iron and folate and [Manufacturer name] Glucose-D*." It would appear that the branding of a bundle of ingredients is a trend that needs to be considered when determining what is appropriate for the promotion of these types of products.

5.3.13 Endorsements

Of the 40 commercially produced foods for general consumption commonly fed to children under the age of two years, 50% (n=20) contained endorsements or text conveying expertise (see Table 5-9). The findings show that there are various forms of endorsement. For example, Figure 5-6 illustrates an endorsement of the declared nutrients from a research body and Figure 5-7 could be considered an endorsement, as the product was the recipient of an award.

Table 5-9 Endorsements / text conveying expertise used on commercially produced foods for general consumption commonly fed to children under the age of two years in Nepal (n=20).

Endorsements / text conveying expertise	Number of labels	Percentage of labels	Example text from labels
Manufacturer	14	70	*A quality product of the [manufacturer name].* *Nutritional Compass: Good to remember; Good to talk; Good question; Good to know.*
Manufacturer represented as expert	5	40	*[Manufacturer Name Nutrition Academy symbol]. To know more about [Product Name] and your child's nutrition, visit us at [website provided]. The [manufacturer name] is where scientific knowledge and expertise come together to create delicious & nourishing products.*
Longevity	2	10	*Asia, Europe and more than 35 countries and even in America noodle lovers search for [manufacturer name]. In reality for the past 30 years [brand name] has been tasted and loved by everyone.* *When the world thinks 'noodles' [brand name] is remembered.*
Award recipient	2	10	*Food Awards 1986 (*see Figure 5-6).
Research body	1	5	*PFNDAI [Protein Foods & Nutrition Development Association of India] endorses declared nutrients of [Manufacturer name] (*see Figure 5-7).

Figure 5-6 Example of a label displaying endorsement of declared nutrients from a research body used on a commercially produced food for general consumption commonly fed to children under the age of two years in Nepal.

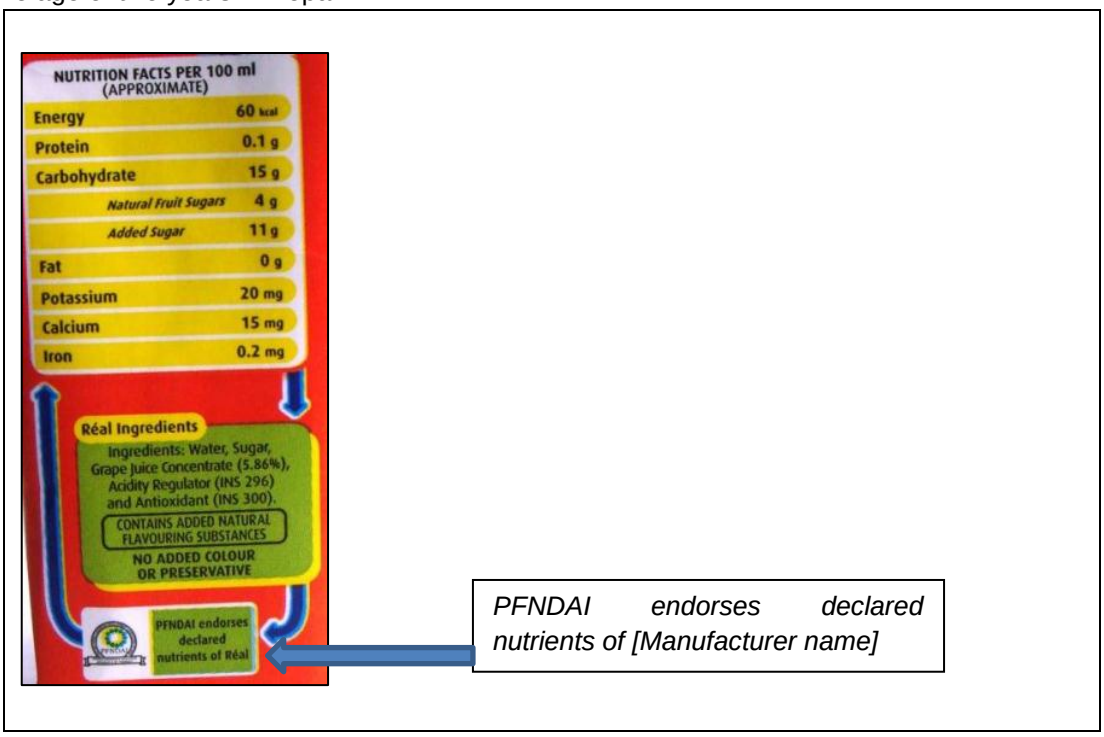


Figure 5-7 Example of a commercially produced foods for general consumption commonly fed to children under the age of two years label in Nepal displaying that they were an award recipient.

5.3.14 Invitation to interact

Thirty five percent (n=14) of the labels of the selected commercially produced foods for general consumption commonly fed to children under the age of two years did not include an invitation to interact, while sixty five percent (n=26) did. Table 5-10 displays all of the categories of invitations to interact that were found on the labels of these products.

It is appropriate for product labels to contain the provision of company contact details for the purpose of reporting product defects or quality issues and this would include invitations such as a customer care line, a postal address, telephone and/or fax number. The checklist (Table 5-5, Question C34) shows that of the 26 product labels that contained any invitation to interact, a total of 10 labels contained an invitation to make direct or indirect contact with the company's marketing personnel. These included websites that invite consumers to make contact that is above and beyond the purpose of reporting product defects or quality issues. It needs to be determined whether or not this is appropriate for this group of products. There is currently no guidance on what would be considered appropriate in terms of manufacturers inviting consumers to interact with them.

Table 5-10 Types of invitation to interact with the manufacturer used on selected commercially produced foods for general consumption commonly fed to children under the age of two years in Nepal (n=26).

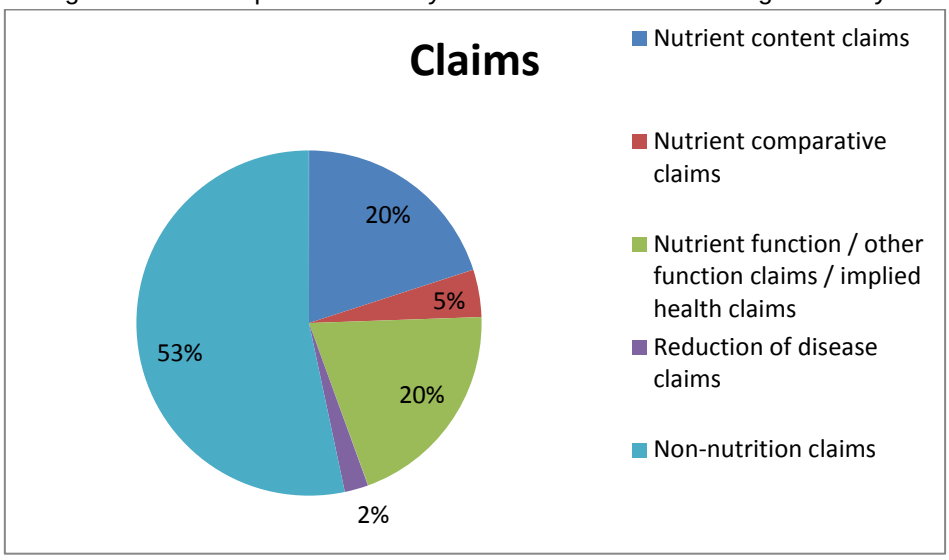
Invitation to interact	Number of labels	Percentage of labels
Customer care line	17	65
Email address	16	62
Postal Address	11	42
Website	8	31
Telephone number	7	27
Fax	2	8

5.3.15 Claims

Codex Alimentarius has clear definitions for the various categories of nutrition and health claims commonly used/permitted on foods (see Table 4-14). Claims are commonly made on the labels of the selected commercially produced foods for general consumption commonly fed to children under the age of two years (Questions C27 – C31 respectively, Table 5-5).

Figure 5-8 shows that of the claims made, the majority (53%) related to non-nutrition claims, followed by the same number of nutrition content and nutrient function/ other function/ implied health claims (20% each respectively). Nutrient comparative (2.5%) and reduction of disease claims (2%) were less common. See sections below (5.3.16.1 and 5.3.16.2) and appendices H and I for a complete description of the prevalence of, and examples of the various categories of claims.

Figure 5-8 Summary of the various claims present on selected labels of commercially produced foods for general consumption commonly fed to children under the age of two years in Nepal.



5.3.15.1 Nutrition and Health Claims

Twenty three percent (n=9) of the labels of the selected commercially produced foods for general consumption commonly fed to children under the age of two years included nutrient content claims (see Table 5-11), 23% made a nutrient function /other function claim (see Table 5-12) and only one label made use of a nutrition comparative claim (see Figure 5-9). Three percent of the labels made a reduction of disease risk claim namely, “Also protects your child against anemia.”

Table 5-11 Nutrient content claims made on the labels of selected commercially produced foods for general consumption commonly fed to children under the age of two years in Nepal (n = 9).

Nutrient content claims	Number of labels	Percentage of labels
Calcium	4	44
Vitamin B_2	3	33
Folic Acid / Folate	2	22
Iron	2	22
Protein	3	33
Vitamin B_6	2	22
Vitamin C	2	22
Vitamins and minerals	2	22
Energy	2	22

Other nutrient content claims which featured once each included Sugar, Fat, DHA, Phosphorous, Trans fat, Vitamin A, Vitamin B_1, Vitamin B_3/Niacin, Vitamin B_{12}, Vitamin D and Vitamins.

Table 5-12 Nutrient function / other function / implied health claims used on commercially produced foods for general consumption commonly fed to children under the age of two years in Nepal (n = 9).

Claims	Number of labels	Percentage of labels
B Vitamins function	4	44
Iron function	4	44
Vitamin A function	4	44
Growth	4	44
Immunity	4	44
Transforming food to energy	4	44
Bones	3	44
Brain/Mental	3	44
Calcium function	3	44
Vitamin C function	3	44
Benefit/beneficial	2	22
Blood	2	22
Copper function	2	22
Energy function	2	22
Fat function	2	22
Iodine function	2	22
Protein function	2	22
Selenium function	2	22
Vitamin D function	2	22
Vitamin E function	2	22
Zinc function	2	22
Health	2	22
Muscle/tissue	2	22
Vision	2	22

Other nutrient function/other function/implied health claims which featured on labels once only, included the following: Acceptance of table food/texture, Cooking method, Development, Digestive health/Intestinal flora, Easy to digest, Electrolyte balance, Fatigue/tiredness, Good/Goodness, Iron absorption, Teeth, Wisdom, DHA function, Magnesium function, Potassium function, Phosphorus function, Vitamin K function, Vitamins and minerals function

See Appendix I for a full breakdown of example text from labels for all of the above categories of nutrient content/ nutrient function/ other function/ implied health claims.

Figure 5-9 Nutrient comparative claims made on the labels of selected commercially produced foods for general consumption commonly fed to children under the age of two years in Nepal.

- *Real grape fruit power. 1 glass (200 ml) provides as much energy as a glass of milk (100 ml of toned milk ~61 kcal)*
- *Stronger [more muscles]; Sharper [increase in attention span scores] [Claims based on a study by NIN Hyderbad comparing micronutrient enriched beverage vs non fortified placebo]*

Five percent of the labels of the selected commercially produced foods for general consumption commonly fed to children under the age of two years contained information that could be interpreted to imply that the product was important for a balanced diet:

- *[Product name] is a nutritional food powder which as part of a balanced daily diet helps meet your child's nutritional requirements.*
- *[Product name] is a nourishing beverage to be taken as part of a balanced daily diet.*

Such products may displace foods from the local diet as they are inexpensive, readily available and attractively packaged.

The following claims were made on the labels of the sweetened beverages that might be considered to undermine the local diet:

- *Stage 1: An easy to digest health drink food specially formulated for toddlers. [Product name] is manufactured by a unique process which helps to easy to digest as it breaks down carbohydrates and proteins in a way that mimics human digestive processes.*
- *Drinking [product name] regularly refreshes and energises you, helping fight tiredness and fatigue caused by the summer heat. It's perfect for growing children and sports persons.*
- *[Product name] has [Branded ingredient], a unique bundle of 7 essential nutrients naturally found in fruits.*

The following could be considered as an example of a claim that both undermines and promotes local foods, "*Good to remember: [Manufacturer & product name] is a source of Protein and Calcium, essential nutrients for you at all stages of life. Make your noodles more nutritious and delicious by adding paneer/vegetables."*

5.3.15.2 Non-nutrition claims

Eighty percent of selected commercially produced foods for general consumption commonly fed to children under the age of two years contained non-nutrition claims which are outlined in Table 5-13.

Table 5-13 Non-nutrition claims contained on the labels of selected commercially produced foods for general consumption commonly fed to children under the age of two years in Nepal (n=32).

Non-nutrition claims	Number of labels	Percentage of labels
Vegetarian	22	69
Additives	19	59
Allergens	9	28
Natural	6	19
Trust	2	6
Certification: Religious	2	6
Quality	2	6
Non-vegetarian	2	6

Additional non-nutrition claims which featured only once included: Real/authentic; Fruit juice; Pure and Other (proprietary food; for wealth; optimal ingredients and not fried).

See Appendix H for a full breakdown of example text from labels for all of the above categories of non-nutrition claims.

It is clear that claims are not uncommon on the labels of commercially produced foods for general consumption commonly fed to children under the age of two years. Provided the claim meets the requirements in national legislation, they would be permitted and may result in the product being attractive to a mother/caregiver. Research is needed to determine the influence claims have on mothers/caregivers when selecting foods to feed their infant/young child and if they would choose a commercially produced food for general consumption that makes a claim in preference to an appropriately formulated commercially produced complementary food that is not permitted to make any claims.

5.3.16 Provision of public health messages

One label of a commercially produced food for general consumption commonly fed to children under the age of two years (Figure 5-10) contained a message encouraging blood donation on the back of the label. It was noted that this label had an image of a child on the front of the packaging and so the well-intentioned message could be confusing to a mother/caregiver. Another label contained a hand-washing message (Figure 5-11).

Figure 5-10 Public health message example: Appeal to donate blood on the label of a commercially produced food for general consumption commonly fed to children under the age of two years in Nepal.

Figure 5-11 Public health message example: Hand-washing recommendation on the label of a commercially produced food for general consumption commonly fed to children under the age of two years in Nepal.

English translation:

'*SOAP WATER HAND, ALWAYS TOGETHER*' (*NOTE: This is a rhyme in Nepali*)

5.3.17 Images and endorsements

Twenty eight percent (n=11) of the labels of selected commercially produced foods for general consumption commonly fed to children under the age of two years did not contain any images on their labels (Questions C4, C7, C8, C9, C11 and C12 respectively, Table 5-5). Images were found on 73% (n=29) of the labels and the majority of them reflected images pertaining to the prepared product (20%) and the ingredients/composition of the product (14%). See Table 5-14 for a description of the categories of images that were displayed on the commercially produced food labels in Nepal.

Table 5-14 Images used on selected labels of commercially produced foods for general consumption commonly fed to children under the age of two years in Nepal (n=40).

Images	Number of labels	Percentage of labels
Ready-to-eat/prepared product	18	62
Ingredients/composition	13	45
Characters/stick figures	4	14
Child	4	14
Design elements: Hearts/circles	4	14
Other products	4	14
Brand mascots	3	10
Design elements: Leaves/trees /plants/flowers/landscapes/shells	3	10
Scientific images/branded ingredients	3	10
Endorsement images[a]	3	10
Animals/insects	2	7
Cup/glass	2	7
Design elements: Stars/moon/sun/clouds/rainbow	2	7
Design elements: Traditional pots/animal spoor/clock	2	7
Foods that are not ingredients	2	7
Preparation/use illustrations	2	7
Sippy cup	2	7
Toys	2	7
Cartoon characters	2	7
Body part	2	7

[a] Figure 5-12 provides an example of what was classified as an 'endorsement image'.

Other images which featured on labels only once included: Animals: Babies displaying stages of development; Bowl; Jug of milk; Mother and child; Raw product; Image of real person/celebrity/sports star who has appeal to children People using/with the product; Place/building; Same product (includes previous front-of-pack shot or picture of individual portions within the container)

Endorsements in the form of images were observed on three of the products in the sample, (see Figure 5-12). In this particular example, the image implies that the product has been endorsed scientifically and therefore may be superior to other products.

Figure 5-12 Example of an 'endorsement image' on the label of a commercially produced food for general consumption commonly fed to children under the age of two years in Nepal.

5.3.18 Labeling practices that could imply suitability for children

A number of practices were observed on the labels of the selected commercially produced foods for general consumption commonly fed to children under the age of two years and research would be needed to determine whether these would make it appear to a mother/caregiver that the product is suitable for a child under the age of two years and so result in:

- Her purchasing such products to feed on a regular basis;
- These foods displacing the traditional diet;
- These foods being purchased in preference to an appropriately formulated commercially produced complementary food.

5.3.18.1 Images that could indicate suitability for children

The following images (see Figure 5-13) could convey suitability of the product for a child or give the appearance that the product is suitable for a child and possibly even be suitable for a child under the age of two years:

- Eight percent of the labels included an image that was unclear as to whether it was a child under or over the age of 2 years and 10% had an image of a child that was clearly over the age of 2 years;
- A real person, such as a celebrity or sports star considered to appeal to children, was found on 3% of the labels (Question C7, Table 5-5, see image 1, Figure 5-13);
- Cartoons or fictional film characters considered to be appealing to children appeared on 5% of the labels (Question C8, Table 5-5, see image 2, Figure 5-13);
- Five percent of labels contained a brand mascot image which was considered to have specific appeal to children (Question C9, Table 5-5, see image 3, Figure 5-13);
- Five percent included an image of a toy on the label (Question C12, Table 5-5, see image 4, Figure 5-13);
- Twenty-three percent of product labels included colors, shapes or designs which may have particular appeal to children (Question C13, Table 5-5, see image 5, Figure 5-13).

Figure 5-13 Images that could indicate suitability for children found on the labels of selected produced foods for general consumption commonly fed to children under the age of two years in Nepal.

1 2 3 4 5

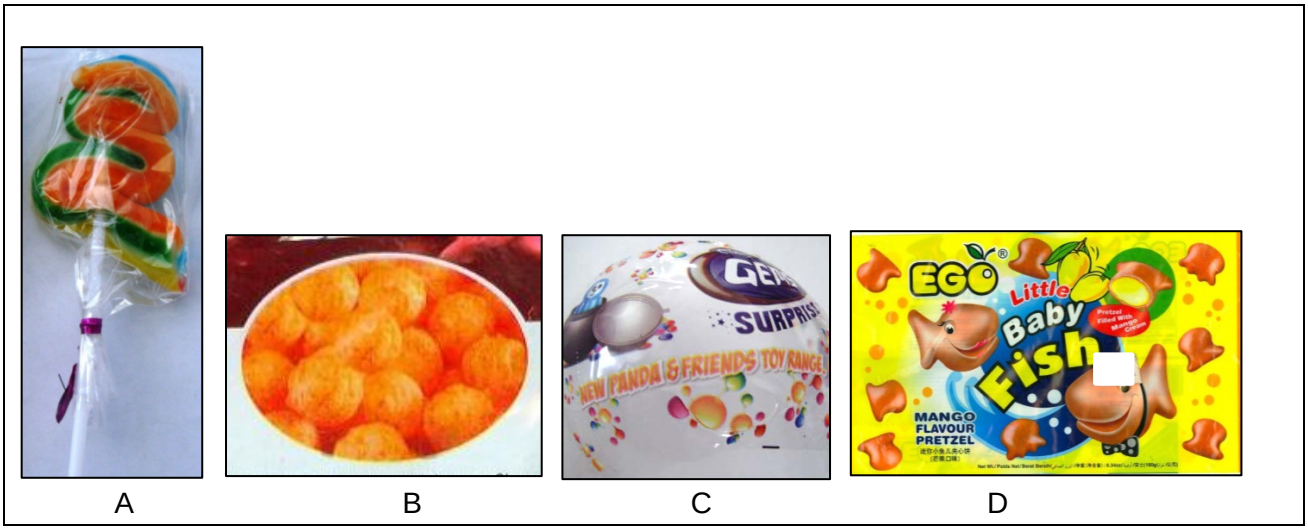
It is uncertain whether these images could indicate suitability for infants/young children to mother/caregivers and research into perceptions and practices would be valuable.

5.3.18.2 Shape(s) that may appeal to children (either label or packaging itself)

Eight products included shapes (either the label or the packaging itself) that could be considered to appeal to children (Question C13, Table 5-5). Examples include:

- Bright colours and the shape of the product (e.g. twisted sweet on a stick) (Figure 5-14, Image A);
- Ball or spherical shaped product (Figure 5-14, Image B);
- Round shape of the product or container (Figure 5-14, Image C);
- Images of fish on the label (wearing a bow tie); bubbles denoting water and the actual product is in the shape of a fish (Figure 5-14, Image D).

Figure 5-14 Shapes that may appeal to children on selected commercially produced foods for general consumption commonly fed to children under the age of two years in Nepal.



A B C D

It is uncertain whether these product attributes could indicate suitability for infants/young children to mother/caregivers and research into perceptions and practices would be valuable.

5.3.18.3 Slogans/tag-line

Twenty-five (62.5%) labels of the selected commercially produced foods for general consumption commonly fed to children under the age of two years contained a slogan or tag-line. One slogan directly appealed to the products suitability for children, "*For active growing children",* as opposed to others that could be considered to suggest their suitability for children - "*Taller. Stronger. Sharper.*"; "*Non-stop energy"*. Still other slogans might be considered as not necessarily implying that they are especially suitable for children - "*A quality product you can trust forever"; "Taste the best"*.

It is uncertain whether the use of tag-lines and slogans could indicate suitability for infants/young children to mother/caregivers and research into perceptions and practices would be valuable.

5.3.18.4 Emotive claims

Eighteen percent (n=7) of the labels of the selected commercially produced foods for general consumption commonly fed to children under the age of two years contained some form of claim that could be considered to be 'emotive' that are directed towards children or their caregivers (see Figure 5-15). Some of these claims they may be considered to be targeted towards children - '*choclaty fun*' or '…*available in 3 exciting flavours*…' Whereas others are clearly not targeted towards children, such as '*A hint of romance…*' and *'An explosion of spicy chatpata taste…*'. For others, it is unclear as to whether they would target children or not.

Figure 5-15 Emotive claims found on the labels of selected commercially produced foods for general consumption commonly fed to children under the age of two years in Nepal.

- *Have more fun by adding it [product] to your favourite Fruit Juices, Nimbu Pani and Lassi.*
- *Choclaty fun, crispy wafer.*
- *Delicious product name is now available in 3 exciting flavours: Elaichi, Chocolate, Original*
- *Live positively*
- *A hint of romance and magic in your day*
- *An explosion of spicy chatpata taste in your mouth with every crunchy bite! Must try exciting flavours: Naughty Tomato, Chilli Chatka, Green Chutney Rajashari Style, Hyberbadi Hungama.*

It is uncertain whether emotive claims could indicate suitability for infants/young children to mother/caregivers and research into perceptions and practices would be valuable.

5.3.18.5 Toys/Competitions/Rewards

In total, four products of the selected commercially produced foods for general consumption commonly fed to children under the age of two years contained either a toy (two products), earned points towards a reward (one product) or encouraged consumers to enter a competition (one product) that appears to appeal to children (Question C11, C12 and C14 respectively, Table 5-5, and see Figure 5-16).

Figure 5-16 Example of a competition that could be considered to appeal to children found on the label of a selected commercially produced foods for general consumption commonly fed to children under the age of two years in Nepal.

[Product name]: Khushiyan (Nepali for happiness).

Tell us: how you created Khushiyan with [Product name] in 2 minutes.

Send your entries: SMS / call - 0 9004790047.

FB: www.facebook.com/[man/product name].or Feature on [brand name] packs and ads.

Please see below side seal for conditions.

It is assumed that toys/competitions/rewards would make these products appealing to mothers/caregivers of infants/young children and research into perceptions and practices would be valuable.

5.3.18.6 Joke/Rhyme/Story

Two labels of the selected commercially produced foods for general consumption commonly fed to children under the age of two years contained a rhyme that could be considered to have appeal to children (Question C15, Table 5-5). The one labels stated "*Mango inside, mango outside. With the touch of diced mangoes on the outside and the pleasure of sweet mangoes inside, immerse yourself in the pure pleasure of the [product name]!"* and the other has a rhyme that recommends hand washing with a specific reference to children ('SOAP WATER HAND, ALWAYS TOGETHER. WASH HANDS, STAY HEALTHY. Notice of wai wai in children health interest).

It is uncertain whether such jokes/rhymes/stories would make these products appealing to mother/caregivers for purchasing for their infants/young children and research into perceptions and practices would be valuable.

5.3.18.7 Representation of fantasy or adventure themes appealing to children

Eight percent of labels contained a representation of fantasy or adventure themes that could be considered to be appealing to children (Question C10, Table 5-5):

- *Lose yourself in the yummy chocolaty layers of…*
- *[Product name] "your favorite snack" brings you cheese balls that will tingle your taste buds.*

It is uncertain whether these representations would make these products appealing to mother/caregivers for purchasing for their infants/young children and research into perceptions and practices would be valuable.

5.3.18.8 Flavors/appearance/textures that appeal to children

Five percent of products were of a flavor that could be considered as specifically appealing to children (Question C17, Table 5-5). For example, Figure 5-17 displays "*Chocolate Pie with Marshmallow Cream*" and "*Mango Flavor Pretzel*" / "*Pretzel filled with Mango Cream"*. It is uncertain if specific flavors appeals to mother/caregivers as being suitable for infant/young children and research into perceptions and practices would be valuable.

Figure 5-17 Flavors that could be considered to be appealing to children found on the labels of selected commercially produced foods for general consumption commonly fed to children under the age of two years in Nepal.

It is uncertain whether these product attributes could indicate suitability for infants/young children to mother/caregivers and research into perceptions and practices would be valuable.

5.3.18.9 Other novelties that could have specific appeal to children

One label of a selected commercially produced food for general consumption commonly fed to children under the age of two years had the physical appearance and texture that did not appear to fit under any of the other categories described, that could be considered to be suitable for children (Question C23, Table 5-5). The product was a very small size that could indicate suitability for young children due to it being easy to hold and/or providing a small serving size (see Figure 5-18). The problem with this example is that there is a warning on the product stating: "*WARNING: Toy unsuitable for babies under 3 years, small parts might be swallowed or inhaled. Adult supervision recommended*." However, this warning does not say that a child under 3 years must not eat the product, just that the toy is not suitable for children under 3 years.

Figure 5-18 Novelties that form part of commercially produced foods for general consumption commonly fed to children under the age of two years in Nepal that could have specific appeal to children: Product displaying small size that could indicate a small portion for a child and that the product is easy for a child to hold.

It is uncertain whether this attributes could indicate suitability for infants/young children to mother/caregivers and research into perceptions and practices would be valuable.

5.4 Considerations pertaining to the labeling practices of commercially produced foods for general consumption commonly fed to children under the age of two years

The inclusion of commercially produced foods for general consumption commonly fed to children under the age of two years in this study was to determine whether there was anything on the product label of this category of foods that could possibly encourage a mother/caregiver to feed the product to an infant or child younger than two years of age, even though there was no such explicit recommendation on the product. It was hypothesised that these labels may contain elements / display practices that could appear to make the product suitable for children and this could therefore potentially encourage mothers/caregivers to choose these possibly energy dense products over more appropriately formulated commercially produced complementary foods.

The nutrient profile and certain label elements/practices of the commercially produced foods for general consumption commonly fed to children under the age of two years in this study indicated that there is reason for concern. Some of the elements/practices to be considered include:

- Nutrition claims;
- Endorsements;
- Images that could indicate suitability for children;
- Shapes of either the label or the packaging that may appeal to children;
- Use of certain slogans / tag-lines / rhymes or stories;
- Emotive claims;
- Toys / competitions / rewards;
- Representation of fantasy or adventure themes appealing to children;
- Flavors / appearance / textures that appeal to children.

As this study did not include research into the perceptions and practices of mothers/caregivers regarding product labels, it is uncertain whether the product attributes included in this report either indicate suitability for infants/young children or would result in these products being chosen over other more appropriate foods. Consumer research regarding mothers/caregivers perceptions and practices is required. This research however highlights that it is critical to ensure that there are no unintended negative consequences of any recommendations made regarding the inappropriate promotion of appropriately formulated commercially produced complementary foods.

6 CONCLUSIONS

It has been recognized by many eminent organizations that commercially produced complementary foods have a role to play in optimal infant and young child feeding. Based on the findings of this study in Nepal, five key themes are considered important in striving to ensure optimal infant and young child feeding:

1. Consistent information supports informed choices.
   Providing consumers with important and valuable information on products is critical as it is this information that mothers/caregivers are likely to use to make their product choices when selecting from available commercially produced complementary foods.

2. A global market requires global guidance.
   There are a number of commercially produced complementary foods available in Nepal with imported products (predominantly from India) making up 64%. Cereals /porridges make up the majority of the available products. In order to ensure optimal infant and young child feeding practices in a global village, consistency of labeling practices becomes important and global guidance is therefore critical.

3. Detailed and specific guidance is required.
   There are a number of elements on product labels that are important and in some cases may be open to interpretation. Detailed guidance is therefore required on all label elements to ensure that commercially produced complementary foods provide factual information, promote optimal infant and young child feeding and never undermine breast-feeding while still allowing the right to freedom of choice.

4. Guidance should not result in unintended consequences.
   Consideration needs to be given not only to the promotion of commercially produced complementary foods, but also foods not specifically marketed for but commonly fed to children under-2 years of age. It is important to ensure that restrictions on the promotion of the former do not result in mothers/caregivers selecting the latter, which often have a poor nutrient profile, due to the fact that they are less restricted. As such, foods not specifically marketed for but commonly fed to children under-2 years, can imply to mothers/caregivers that they are suitable for infants and young children as they are able to make nutrition and health claims and are less regulated in terms of images and other marketing techniques used on labels. Furthermore, consideration also needs to be given to the possibility that restrictions on promotion of appropriately formulated commercially produced complementary foods, may result in manufacturers removing the age recommendation for their products so as not to fall into the 'infant' (person under the age of 12 months) and more specifically 'young child' (person under 24 months of age) category and therefore being able to promote potentially unsuitable products.

5. Monitoring and enforcement of existing policies can be strengthened.
   Nepal regulates all products that are marketed as suitable for infants (children under 12 months). The Nepalese legislation contains comprehensive labeling recommendations in line with, and in some cases going beyond, the *International Code of Marketing of Breast-milk Substitutes* in its restrictions. The WHO recommends that countries should periodically review their regulations in line with the Code and its subsequent WHA resolutions and that monitoring and enforcement requires continued strengthening. In line with this the Nepalese legislation requires review and its monitoring and enforcement requires strengthening.

The ARCH findings in Nepal illustrate the need and the opportunity to give more clarity and detailed and practical global guidance on the appropriate promotion of foods for infants and young children. The WHO Position Paper on 'Inappropriate promotion of foods for infant and young children' (Annex 2 of document EB134/5) is a positive step, but more specific guidance is needed within each of the 5 criteria categories. In addition there are some practices that are not included in the 5 criteria that need to be considered and be more clearly defined. This detailed guidance is necessary in order to help countries develop clear and specific regulations for the appropriate marketing of complementary foods.

Specific WHO guidelines on the promotion of commercially produced complementary foods should address multiple aspects of promotion, including but not limited to:

- Appropriate nutrition claims;
- Suggested wording for a statement supporting breastfeeding and the role of local foods;
- Cross-promotion of breast-milk substitutes and complementary foods;
- Appropriate imagery and invitations to interact with consumers;
- Appropriate endorsements; and
- Guidance around product composition, consistency and appropriate daily rations.

There is also an opportunity to address the issue of the promotion of foods not marketed directly for, but commonly fed to infants and young children, by strengthening the support of the WHO *Recommendations on the marketing of foods and non-alcoholic beverages to children* as a foundation. For example this study found that commercially produced foods not marketed to but commonly fed to children under two years contained a number of claims including nutrient content claims and nutrient function / other function / implied health claims. If such claims are prohibited on appropriately formulated commercially produced complementary foods it may lead to the scenario where a mother/caregiver evaluates the commercially produced foods for general consumption commonly fed to children under the age of two years as being more suitable to feed to her child. Furthermore compared to commercially produced complementary food cereals/porridges (local and imported), locally produced foods not marketed to but commonly fed to children under two years, cost on average 50% less per portion. This could be a critical factor which may influence the purchase of such products.

Providing consumers with important and valuable information on products is critical, as it is this information that mothers/caregivers are likely to use to make their product choices when selecting from available foods. However any information provided must be factual, promote optimal infant and young child feeding, and never undermine breast-feeding.

Consideration therefore needs to be given to both the promotion of commercially produced complementary foods and foods not marketed for but commonly fed to children under-two years of age. These two categories must not be viewed in isolation. For optimal infant and young child feeding it is important to ensure that restrictions on the promotion of the former do not result in mothers/caregivers selecting the latter, due to the fact that they are less restricted and as such can imply to mothers that they are suitable for infants and young children. This could potentially be significant in populations with a lower literacy/education level.

Consideration also needs to be given to the possibility that if there are total restrictions on all promotion of appropriately formulated commercially produced complementary foods, manufacturers may decide to remove the age recommendation for their products. More research is needed to explore these.

The findings of the ARCH Project in Nepal indicate that more guidance is needed on a number of label elements as discussed in this report, in order to both strengthen the Nepalese *Mother's Milk Substitutes (Control of Sale and Distribution) Act* (Nepal Govt, 1992) and to enable effective monitoring and enforcement of labeling practices. This is crucial in further advancing Nepal's efforts to promote optimal feeding practices for infants and young children and scale up nutrition, while also allowing mothers/caregivers the right to freedom of choice.

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8 APPENDICES

8.1 APPENDIX A:

INSTRUCTIONS FOR INFORMAL STORE VISITS

NEPAL: INSTRUCTIONS FOR INFORMAL STORE VISITS

- **WARD SAMPLING**:
  - **9 Formal Stores** (NS01-NS09) have been selected and visited for the Nepal Labeling and POS Promotion Study
  - **22 Informal Stores** (NS10-NS31) must now be located and visited from a random sample of 11 urban wards:
    - 11 urban wards have been randomly sampled from a total of 57 wards making up the two most urban municipalities (Kathmandu Metropolitan City and Lalitpur Sub-metropolitan City) in the Kathmandu Valley's Kathmandu and Lalitpur Districts, and are provided in Table 1 as 'Wards Randomly Sampled'[3]
    - 2 informal stores must be visited for each 'Ward Randomly Sampled'
    - For every 2 wards visited, 1 ***Independent Pharmacy*** must be included (see Table 1). This means 5 *Independent Pharmacies* must be visited in total;
    - The remaining stores visited, of which there are 17, must be ***Corner Stores***
    - If the 22 Informal Stores (5 *Independent Pharmacies* and 17 *Corner Stores*) cannot be located in the 'Wards Randomly Sampled', missing stores must be located in neighboring wards as described further on in this document
  - A total of 31 stores will be included in Nepal's Labeling and POS Promotions Study (9 Formal Stores and 22 Informal Stores)

Table 1: Random Sampling of Urban Wards in the Katmandu Valley for Informal Store Visits

KATHMANDU VALLEY URBAN WARDS			NO. OF WARDS INCLUDED IN RANDOM SAMPLE	WARDS RANDOMLY SAMPLED	NO. OF INFORMAL STORES VISITED (*Independent Pharmacies; Corner Stores*)
DISTRICT	**MUNICIPALITY**	**NO. OF WARDS**			
Kathmandu	1. Kathmandu Metropolitan City	35	7	9, 12, 16, 22, 26, 32, 34	14 (3; 11)
Lalitpur	2. Lalitpur Sub-metropolitan City	22	4	7, 17, 19, 20	8 (2; 6)
Total:	**2**	**57**	**11**		
				Informal stores (*Independent Pharmacies; Corner Stores*)	**22** (5; 17)
				Formal stores	**9**
				Total stores	**31**

[3] Of the 5 municipal areas in Kathmandu Valley Kathmandu metropolitan city and Lalitpur sub-metropolitan city were included in the informal store visits. Bhakptapur municipality, Kirtipur municipality, and Madhyapur Thimi municipality were excluded from the study due to challenges experienced with access to stores. Although these areas are officially classified as urban, some areas appear to be rural or very sparsely populated as well as the areas having poor road infrastructure, making it difficult to implement the study methodology with regard to store sampling.

- **STORE VISITS:**
  - Follow the instructions provided in 'Activity Plan POS Promotion and Phase 2B'.
  - The remaining instructions provided in this document are additional to those provided in 'Activity Plan POS Promotion and Phase 2B' so please also read the Activity Plan again and ensure you are familiar with its contents.

- **PREPARING FOR STORE VISITS:**
  - The *Informal Stores Sampled List* has been prepared for you (the point of departure and store codes have been added). Please check that it is correct. The 'Store Type', 'Store Name', 'Store Address' and 'GPS coordinates' can only be completed from the *Store Characteristics Form* once the store has been located and not before store visits.
  - Plan the route and store visits per day:
    - Print out ward maps for all the 'Wards Randomly Sampled' (Table 1).
    - Determine how many and which wards can be visited in a day and plan a route that makes sense to you. It is important to visit all the wards in one municipality before moving on to the next. However the order of wards visited in each municipality is not important.
    - Make sure that you have enough time at the end of the day (or before going out to stores at the beginning of the next day) to upload the updated *Data Collection Form*, and to scan and upload the *POS Promotion Forms*, *Store Characteristics Forms* and *POS Promotion Photographs* to Dropbox, before going to the next set of stores. Saving to Dropbox needs to be done on a daily basis and not only after all of the Informal Store have visits taken place.

- **DEPARTURE POINT** (from which researchers can travel to find the informal stores):
  - The Ward Office (1 per ward) should be used as the point of departure in each randomly sampled ward.
  - Locating Ward Offices:
    - These are indicated on your ward maps as well as on the Google Maps mobile telephone application, which has GPS that will guide you to the Ward Office. If you cannot locate the Ward Office, please call them on the Ward Office telephone number obtained previously to ask for directions.

- **LOCATING INFORMAL STORES:**
  - From the departure point, informal stores must be located by:
    - Asking an adult female passer-by where the nearest informal store is (providing an example of the store you are looking for e.g. nearest corner store that sells breast-milk substitutes and/or commercially produced complementary foods). If no females are present, ask a male. You will need to think of terminology to clearly describe breast-milk substitutes/commercially produced complementary foods to the passer-by (e.g. 'infant formula e.g. Nan' and 'baby cereal or other baby foods e.g. Cerelac') as relevant in Nepal.
    - If there is no one available to ask, throw a pen/pencil in the air and when it lands, start walking in the direction that the tip of the pen/pencil points to. If the pen/pencil points to an impossible route, try again until it points to a possible route. Walk until encountering a passer-by to ask for directions, or until encountering the relevant informal store.
    - After visiting the first store, ask a passer-by or the store manager for directions to the next nearest informal store (or continue on the randomly selected route) until you have located 2 informal stores for that ward.
    - Monitor your movements against the ward maps/Google Maps to ensure that if you cross over into the next ward, you record the correct ward number against the name of the store in the 'Informal Stores Sampled List'. NB: do not include stores in wards outside of the relevant municipality.

- **INFORMAL STORES TO BE VISITED PER WARD:**
  - In total, you will need to locate:
    - 5x *Independent pharmacies*
    - 17x *Corner Stores*
  - **Locating Independent Pharmacies:**
    - Attempt to locate the allocated quota of *Independent Pharmacies* (3 in Kathmandu Metropolitan City; 2 in Lalitpur Sub-metropolitan City) in the first few wards visited in each Municipality.
    - If successful, this implies that in the first few wards visited you will select 1 *Independent Pharmacy* and 1 *Corner Store*. In subsequent wards in that Municipality you will then select 2 *Corner Stores* per ward. Do not visit more than one pharmacy per ward.
    - If unsuccessful, you will select 2 *Corner Stores* in the first wards and look for 1 *Independent Pharmacy* in subsequent wards.
  - **Insufficient Informal Stores per ward**:
    - If any of the 'Wards Randomly Sampled' do not contain sufficient *Informal Stores*, visit a neighboring ward in the same municipality in order to locate sufficient *Informal Stores*, bearing in mind that no more than 2 informal stores can be visited per ward (i.e. 1 *Informal Pharmacy* and 1 *Corner Store*, OR 2 *Corner Stores*). Locate the relevant store/s by asking a passer-by or the manager of the previous store visited to direct you to the closest store that sells BMS and/or commercially produced complementary foods. This will take you out of the randomly sampled ward and into a neighboring ward. Record the correct ward number against the name of the store in the 'Informal Stores Sampled List'.
  - **Store doesn't sell BMS/Commercially produced complementary foods**:
    - If a *Corner Store*/*Independent Pharmacy* is located but DOES NOT sell breast-milk substitutes or commercially produced complementary foods, after checking the store thoroughly, leave the store and locate the next closest *Corner Store/Independent pharmacy* that does sell breast-milk substitutes/commercially produced complementary foods.
    - Locate the next closest relevant store/s by asking a passer-by or the manager of the previous store visited to direct you to the closest store that sells breast-milk substitutes and/or commercially produced complementary foods. This may take you out of the randomly sampled ward, in which case record the correct ward number against the name of the store.
    - Record this information in the '*Informal Stores Sampled'* form (last column) in order to keep track of how many stores needed to be 'replaced'.
    - When adding a replacement store to the 'Informal Stores Sampled' list (i.e. if you run out of store codes for the Ward you are in) using the empty rows on page 3, allocate a new store number starting at NS32.
    - The next store should be located by asking a passer-by/store manager (as described previously), and if none are available make use of the pen/pencil to determine your route (as described previously).
  - **Store owner asks researchers to leave the store before they have completed Labeling Study and/or POS Promotion activities**:
    - Leave the store and replace it with the next closest *Corner Store/ Independent pharmacy* that sells breast-milk substitutes/commercially produced complementary foods.
    - Record this information in the 'Informal Stores Sampled' form (last column) in order to keep track of how many stores needed to be 'replaced'.
    - When adding a replacement store to the 'Informal Stores Sampled' list (i.e. if you run out of store codes for the Ward you are in) using the empty rows on page 3, allocate a new store number starting at NS32.

- **Stores to exclude:**
  - Store types visited as part of the formal store visits.
  - Non-store based retailors (e.g. traditional markets, informal vendors and street hawkers).
  - Any informal store types not included on the Informal Distribution Channels sheet in your '*List of Stores Scoped*'.
  - Any informal store that does not sell breast-milk substitutes/commercially produced complementary foods.

/ENDS

8.2 APPENDIX B:

DATA COLLECTION FORM

ARCH LABELING STUDY: DATA COLLECTION FORM

The following is a sample 'Data Collection Form 'for use during 'PHASE 2B: Products purchased by HKI country Staff'

Note:
- The 'Data Collection Form' for your country will be created by adapting your final 'Master List'.
- Examples have been provided in italics and should be deleted before using the form.
- You may need to add more rows for new products/increase row heights before you print this document for store visits.
- Product numbers and store numbers must be unique.
- Use a new 'Data Collection Form' for each day of purchasing products that has been updated to reflect the previous day's data collection/purchases.

Product Code	**Manufacturer / Distributor**	**Brand Name**	**Sub-Brand Name**	**Descriptive Name (*as provided on label*)**	**Flavour Variant *(pick the most common or first variant)***	**Age of introduction *(in mo/yrs - as provided on label)***	**Age category** *(Stages or age descriptor e.g. baby/ toddler)*	**Single / double serving? (***Answer: Yes; No; Not Provided)*	**Packaging**	**Price** (as purchased) - **Nepalese Rupee**	**Bought at (***store code)*	**New** (N) / **Bought in Phase 2** (P2)	**Formula for Special Medical purposes**	consumption CPF(added because promo-
A. STARTER / INFANT FORMULA														
N101	Nestle India Limited	Lactogen	NA	Infant Formula Powder	NA	Up to 6 months	1	No	Box	441.00	NS 03	NA	No	
N102	Nestle India Limited	Nan	Pro	Infant Formula with Probiotics	NA	Up to 6 months	1	No	Box	784.00	NS 02	NA	No	
N103	Manufactured for Nutricia Int Pvt Ltd (a subsidiary of Danone); MFT by	Farex	NA	Starter infant formula	NA	From birth	1; Step 1	No	Tin	467.00	NS 01	NA	No	

	Carol Info Services Limited. Farex is a TM of Danone Asia Pacific Holdings Pte Ltd.													
N112	Nestle India Ltd.	Nestogen	NA	Infant Formula Powder	NA	Up to 6 months	1	No	Box	335.00	NS 02	N	No	
N115	SMA Nutrition	SMA	Advanced Gold System	Extra Hungry Infant Milk for hungrier babies. When baby is not breastfed or to combination feed with breast milk.	NA	From birth	NA	No	Tin	1 285.00	NS 01	N	No	

B. FOLLOW UP FORMULA														
N104	Nestle India Ltd	Lactogen	NA	Follow up formula - powder	NA	After 6 months; 6 months+	2	No	Box	440.00	NS 02	NA	No	
N107	Nestle India Ltd	Nan	Pro	Follow up formula - powder	NA	After 6 months; 6 months+	2	No	Box	744.00	NS 02	NA	No	
N109	Manufactured by Nutricia Int Pvt Ltd; Marketed by	Farex	NA	Follow up formula; Complementary food	NA	After 6 months & up to 24 months	Step 2	No	Tin	546.00	NS 01	NA	No	

	Nutricia Int Pvt Ltd (a subsidiary of Danone). Farex is a TM of Danone Asia Pacific Holdings Pte Ltd.													
N114	Nestle India Ltd	Nestogen	NA	Follow-up formula powder	NA	After 6 months; 6 months +	2	No	Box	335.00	NS 02	N	No	
N116	SMA Nutrition	SMA	Advanced Gold System	Follow on milk to complement the weaning diet. When baby has moved on to eating solid foods.	NA	6+ months	2	No	Tin	1 148.00	NS 01	N	No	
C. INFANT OR FOLLOW UP FORMULA FOR SPECIAL DIETARY OR MEDICAL PURPOSES														
None														
D. OTHER MILK OR MILK-LIKE PRODUCTS in liquid/powdered form, marketed or otherwise represented as suitable for feeding children <2yrs (e.g. growing-up milks, toddler milks, first milks)														
N105	Nestle India Limited	Lactogen	NA	Follow up formula - powder for older infants	NA	After 12 months; 12 months+	3	No	Box	442.00	NS 02	NA	No	
N106	Nestle India Limited	Lactogen	NA	Follow on formula – powder for	NA	From 18 months; 18 months +	4	No	Box	434.00	NS 01	NA	No	

				older infants										
N108	Nestle India Limited	Nan	Pro	Follow up formula for older infants	NA	After 12 months; 12 months +	3	No	Box	744.00	NS 02	NA	No	
N110	Nestle (Netherlands)	Nido	Fortified	Instant Full Cream Milk Powder	NA	Not to be used to feed infants below 12 months	NA	No	Tin	490.00	NS 01	NA	No	
N113	Nestle (India Ltd.)	Nan	Pro	Follow-up formula powder for older infants	NA	After 18 months; 18 months	4	No	Box	744.00	NS 02	N	No	
2. COMMERCIALLY PRODUCED COMPLEMENTARY FOODS (COMMERCIALLY PRODUCED COMPLEMENTARY FOODS)														
A. FOOD														
A1. SHELF STABLE FOOD														
A1.1 CEREAL / PORRIDGE														
N202	Nestle India Ltd	Cerelac	NA	Fortified Baby Cereal with Milk	Wheat	6 months +	Stage 1	No	Box	251.00	NS 02	NA		
N203	Nestle India Ltd	Cerelac	NA	Fortified Baby Cereal with Milk	Wheat Orange	8 months +	Stage 2	No	Box	324.00	NS 02	NA		
N204	Nestle India Ltd	Cerelac	NA	Fortified Baby Cereal with Milk	Wheat-Rice Mixed Veg	10 months +	Stage 3	No	Box	375.00	NS 02	NA		
N205	Nestle India Ltd	Cerelac	NA	Fortified Baby Cereal with Milk	Multi grain 5 Fruit	From 12 months	Stage 4	No	Box	366.00	NS 02	NA		
N224	Nestle India Ltd	Cerelac	NA	Shishu Aahar (Baby's Meal)	Wheat Rice-Moong Dal Khichdi (Wheat, rice	6+ months	Stage 1	No	Box	330.00	NS 04	N		

					and lentil porridge)									
N225	Nestle India Ltd	Cerelac	NA	Shishu Aahar (Baby's Meal)	Wheat Rice-Moong Dal Veg Khichdi (Wheat, rice and lentil porridge)	8+ months	Stage 2	No	Box	324.00	NS 02	N		
N206	Manufactured by: Nutrition Int Pvt Ltd; Marketed by Nutricia Int Pvt Ltd (Subsidiary of Danone)	Farex	NA	Milk Cereal Based Complementary Food	Wheat Apple	6 months+	Stage 1	No	Box	260.00	NS 01	NA		
N207	Wockhardt Ltd	Farex	NA	NA	Wheat Rice Fruits	NA	Stage 2	No	Box	280.00	NS 01	NA		
N208	Manufactured by: Nutrition Int Pvt Ltd; Marketed by Nutricia Int Pvt Ltd (Subsidiary of Danone)	Farex	NA	Milk Cereal Based Complementary Food	Multi cereal Mixed Fruit	8 months+	Stage 3	No	Box	280.00	NS 01	NA		
N210	Sun Mark Ltd.	Golden Country	NA	Baby Cereal	5 Fruits Wheat & Milk	From 6 months	Infants	Yes	Sachet	75.00	NS 02	NA		
N211	Nestle India Ltd	Nestum	NA	Baby Cereal	Rice	After 6 up to 24 months	Stage 1	No	Box	235.00	NS 02	NA		
N212	Nestle India Ltd	Nestum	NA	Baby Cereal	Rice Dal Vegetable	From 8 to 24 months	Stage 2	No	Box	252.00	NS 02	NA		
N213	Nestle India Ltd	Nestum	NA	Baby Cereal	Rice 3 Fruit	From 10 to 24 months	Stage 3	No	Box	270.00	NS 02	NA		

N214	Instant Meal Pvt Ltd	Chaudhary's	Sarvottam	Premium Lito	Wheat Mango	Above 6 months	Infants	No	Box	150.00	NS 02	NA		
N215	Prem Sewa Naya Lito Udyog	Naya Lito	NA	High Protein Health Food	NA	From 6 months	NA	No	Box	95.00	NS 07	NA		
N216	Shree Sarbottam Pitho Udhyog	Sri Sarbottam	Pitho	NA	NA	6 months	Specially for Infant to Old	No	Box	99.00	NS 02	NA		
N218	Biral Health Food Products P. Ltd.	Santulit	Sattu	Instant cereal	Mixed Fruit	From 6+ months	Infants	No	Box	94.00	NS 01	NA		
N221	NA	ABC's	Sarbottam Lito Special	High Protein Energy Health Food	NA	After 5 months	Infants	No	Box	125.00	NS 02	N		
N222	Tulasi Lito Udhyog	Tulasi	Lito	Healthy Meal	NA	After 6 months of age	NA	No	Box	125.00	NS 03	N		
N226	Thapa Baby Foods Industries Pvt. Ltd.	Baby Sarvottam	Litto	Nutritious Foods	NA	After 5 months onwards	For Baby, Youth, Elderly, and the sick	No	Box	109.00	NS 05	N		
N227	Sarbottam Pitho Udhyog	Mitho Sagun	NA	Nutritious Foods	NA	After 6 months	NA	No	Box	120.00	NS 10	N		

A1.2 HOMOGENISED / PUREED FOOD														
N220	H.J. Heinz Co. Ltd	Heinz	NA	NA	Strawberry Cheesecake	From 4 to 36 months	Baby	No	Tin	155.00	NS 03	NA		

A1.3 SNACKS / FINGER FOODS
None

A1.4 GRAVY / SOUP
None

A2. FRESH / FROZEN FOOD
None

B. BEVERAGES
B1. TEA / JUICE / WATER
None

B2. MILKSHAKE POWDER
None

C. LIPID NUTRIENT SUPPLEMENTS (LNS)
None

D. MICRO-NUTRIENT POWDERS (MNP)
None

3. COMMERCIALLY PRODUCED FOODS (COMMERCIALLY PRODUCED FOODS FOR GENERAL CONSUMPTION COMMONLY FED TO CHILDREN UNDER THE AGE OF TWO YEARS) for general family consumption that are commonly fed to children under the age of 2 years														
1. BISCUITS / COOKIES														
N301	Antartic Biscuit Pvt Ltd	Parle G	Original Gluco	Biscuits	NA	NA	NA	*Yes*	Foil	5.00	NS 03	NA		No
N302	Nebico Pvt Ltd	Glucose	NA	Biscuits	NA	NA	NA	Yes	Foil	10.00	NS 02	NA		No
N303	Britannia Industries Ltd.	Good Day	NA	Butter Cookies	Butter	NA	NA	Yes	Foil	12.00	NS 02	NA		No
N328	Khajurico India Pvt Ltd	Glucose	NA	Biscuits	NA	NA	NA	No	Foil	10.00	NS 03	N		No
N342	Chahana Pouroti	Utsav	NA	Italian Cookies	NA	NA	NA	No	Plastic	35.00	NS 25	N		No

	Udhyog Pvt. Ltd.													
N223 (N399)	Kee Wee Hup Kee Food Manufactur e Sdn Bhd	EGO	Little Baby Fish	Pretzel Filled With Mango Cream	Mango Flavor Pretzel	NA	NA	Yes	Foil	204.00	NS 03	N		No
2. CAKE / SPONGE CAKE														
N304	Orion Group	Choco-pie	NA	Chocolate Pie	Marshmallow Cream	NA	NA	Yes	Box	120.00	NS 02	NA		No
N333	Product of Bibica Corporation Under TM & tech-nology license of Lotte Confection ery Co. Ltd	Lotte	NA	Choco- pie	Chocolate	NA	NA	Yes	Box	114.00	NS 01	NA		No
N341	Krijma Bakery Udhyog	Krijma	NA	Special Slice Cake	NA	NA	NA	No	Plastic	15.00	NS 11	N		No
3. CANDY / SWEETS / CHOCOLATES														
N305	Cadbury India Ltd	5-star	NA	Filled chocolate	NA	NA	NA	No	Foil	12.00	NS 02	NA		No
N306	Nestle India Ltd	Kit-Kat	NA	Crisp wafer fingers covered with chocolayer	NA	NA	NA	No	Foil	19.00	NS 02	NA		No
N307	Sujal Foods (P) Ltd	Choco Fun	NA	Chocolaty fun, crispy wafer	NA	NA	NA	Yes	Plastic	90.00	NS 01	NA		No

N334	Imsofer Manufacturing India Pvt Ltd	Kinder	Joy	Milky & cocoa spreads with 2 coated wafer biscuits, including a toy.	NA	NA	NA	No	Foil	55.00	NS 07	N		Yes
N338	Haribo	Kinder Schnuller	NA	Gummy Candy	NA	NA	NA	No	Plastic	152.00	NS 02	N		Yes
N336	Cadbury India Ltd	Gems	Surprise	NA	NA	NA	NA	No	Plastic Ball	49.00	NS 05	N		Yes
N340	NA	NA	NA	NA (Colorful Lollipop)	NA	NA	NA	Yes	Plastic wrapper	15.00	NS 01	N		Yes
4. CHIPS / CRISPS														
N308	Chaudhary Group (CG) Foods (Nepal) Pvt Ltd	Kwiks		Cheese Balls	NA	NA	NA	No	Foil	15.00	NS 03	NA		No
N309	PepsiCo India Holdings PT. Ltd (Frito-Lay Division)	Kurkure	Namkeen	NA	Masala Munch	NA	NA	No	Foil	20.00	NS 09	NA		No
N310	PepsiCo India Holdings PT. Ltd (Frito-Lay Division)	Lay's	My Pack	Potato Chips	Spanish Tomato Tango	NA	NA	No	Foil	20.00	NS 04	NA		No

5. YOGHURT														
N311	Kathmandu Dairy	Snow Fun	NA	Special Yogurt	NA	NA	NA	NA	Plastic Container	60.00	NS 12	NA		No
N312	DDC Manufactured by Dairy Development Corporation	Yogurt	NA	Yogurt for Health & Wealth	NA	NA	NA	NA	Plastic	45.00	NS 03	NA		No
6. SODA / CARBONATED BEVERAGES														
N313	Bottled by Bottlers Nepal Limited under authority of Coca Cola Company. Fanta is a registered trademark of Coca-Cola Company.	Fanta	NA	Carbonated beverage	Orange Flavor	NA	NA	No	Bottle	60.00	NS 03	NA		No
N314	PepsiCo India	Slice	NA	Ready to serve fruit beverage with real mango pulp	Mango	NA	NA	No	Bottle	85.00	NS 03	NA		No
7. OTHER - COUNTRY SPECIFIC														
N315	Nestle India Ltd	Maggi	NA	2-minute Noodles. Instant noodles	Masala	NA	NA	*No*	Foil	24.00	NS 01	NA		No

				with Tastemaker										
N316	CG Chaudhary Groups (Nepal) Pvt. Ltd.	Wai Wai	NA	Instant Noodles	Chicken	NA	NA	No	Foil	15.00	NS 02	NA		No
N317	Him-Shree Foods P. Ltd.	Rara	NA	Instant Noodles	With chicken soup base	NA	NA	No	Foil	15.00	NS 02	NA		No
N318	Shree Gupta Food Products	Maheshko Dalmut	Bhujia Mixture	Special Dalmut	NA	NA	NA	No	Plastic	53.00	NS 09	NA		No
N319	Khajurico Nepal Pvt	Puffino	NA	Puff Pastry	NA	NA	NA	No	Foil	60.00	NS 09	NA		No
N320	Laxmi Packing Udhyog	Phurandana	NA	NA	NA	NA	NA	No	Plastic	15.00	NS 09	NA		No
N321	Shree Gupta Food Products	Maheshko Dalmut	Bhujia Mixture	Special Dalmut (+ peas)	NA	NA	NA	No	Plastic	53.00	NS 09	NA		No
N332	Nanglo Bakeries Pvt. Ltd.	Nanglo	NA	Sliced White Bread	NA	NA	NA	No	Plastic	50.00	NS 04	NA		No
N323	Special Food Industry	Healthy & Tasty Foods	NA	Special Red Beaten Rice	NA	NA	NA	No	Plastic	118.00	NS 02	NA		No
N324	DDC (Dairy Development Corporation)	DDC	NA	Full Cream Pasteurized Milk	Full Cream (Whole)	NA	NA	No	Plastic	33.00	NS 01	NA		No
N335	Premier Bhujiya OM SHREE MAHALAXMI CHIURA CHAAMAL	Premier Bhujiya	Special Bhujiya	Salted Puffed Rice	NA	NA	NA	No	Plastic	35.00	NS 09	N		Yes

	BHUJIA KHADYA UDHYOG													

8. SWEETENED DRINKS (NON-CARBONATED)														
N325	Dabur Nepal Pvt. Ltd.	Real Fruit Power	Ben 10	Grape Beverage	Grape	NA	NA	No	Tetrap ack	30.00	NS 02	NA		No
N326	Chaudhary Groups (CG) Foods (Nepal) Pvt. Ltd.	Rio	Alfons o	Flavoured Juice Drink	Mango	NA	NA	No	Tetrap ack	22.00	NS 02	NA		No
N327	Kraft Foods (Thailand) Ltd	Tang	Fruit Power 7	Instant Drink Mix	Strawberry	NA	NA	No	Foil	124.00	NS 02	NA		No
N329	GlaxoKline Smith Consumer Health Care Ltd	Horlicks	Junior	Malt Based Food	Original	NA	Stage 1	No	Plastic Jar	329.00	NS 02	N		Yes
N337	Dabur Nepal Pvt. Ltd	Glucose -D	NA	99.4% Pure Glucose	NA	NA	NA	No	Box	34.00	NS 05	N		Yes
N339	GlaxoKline Smith Consumer Health Care Ltd	Horlicks	NA	Malt Based Food	Chocolate	NA	NA	No	Plastic Jar	286.00	NS 02	N		Yes

/ENDS

8.3 APPENDIX C:

LETTER OF REQUEST TO STORE MANAGER

TO WHOM IT MAY CONCERN

Re: REQUEST for permission to conduct observations for a study on foods for infants and young children

Helen Keller International (HKI) is conducting a research project that is gathering information on the promotion of foods consumed by infants and young children in four countries, including *[Insert name of country].* The data gathered will be provided to relevant stakeholders to guide the development of evidence based policies and programs and so contribute towards improved global child health.

The study will involve the following:
One variant of each of the following categories of products, available in *[insert relevant city/metropolis name],* will be purchased from leading retailers/wholesalers, including your store:
Breast-milk substitutes e.g. Infant formulas, follow-up formulas, and toddler milks.
Complementary foods e.g. baby cereals/porridges, pureed food, snacks, teas and juices.
Snack foods.
The information contained on the label will be captured and be compared to national and international best practice labeling guidance.
Any point-of-sale promotions (such as product launches, special displays, sales, shelf tags, issuing of pamphlets etc.) for any of these products will be noted.

Permission required
The research aims to purchase as many foods for infants and young children as possible in [*Insert name of city/metropolis*].

In order to do this, the research team would like to purchase some of these products from your store. In addition, we would like to request permission to take photographs of any relevant point-of-sale promotions of the above-mentioned products taking place in your store.

The information gathered will not be reported by store, and will not be used to assess your store in any way – it will only gather the information on the labels of the food products purchased and point-of-sale promotions of these foods.

If you have any questions please feel free to call:
[*Insert relevant names and phone numbers of HKI country staff*]

Thank you in advance for your assistance.

Yours Sincerely,
[*Insert relevant name of HKI country coordinator*]

/ENDS

8.4 APPENDIX D:

LABELING PRACTICES CHECKLIST FOR COMMERCIALLY PRODUCED COMPLEMENTARY FOODS

No.	Labeling practice questions:	Answers:	Criteria for choosing answers:
1	Is the product label written in the appropriate language(s) of the country in which the product is sold?	Yes	All label information is written in Khmer.
		Partial	Some (not all) label information is written in Khmer.
		No	No label information is written in Khmer.
2	Does the insert contain any **required label information** that is NOT present on the label?	Yes	The insert includes required label information that is NOT provided on the label.
		No	Information provided in the insert is: (a) Required label information that is also provided on the product label; and/or (b) Non-required label information.
		NA	No insert
3	Does the product label specify a recommended age of introduction that is less than 6 months of age?	Yes	Recommended age of introduction is less than 6 months of age (180 days / the 7th month of life).
		No	Recommended age of introduction is 6 months of age (180 days / the 7th month of life) or later.
		NA	The label does not specify an appropriate / recommended age of introduction.
4	Does the product label give instructions indicating how to feed the product to infants younger than six months?	Yes	
		No	
5	Does the product label include phrases such as 'from the start'; 'for the whole family' or 'first stage'?	Yes	The product label uses words or phrases that may, directly or indirectly, indicate that the product is suitable for use from birth; for infants younger than 6 months; for all infants; for the whole family including infants younger than 6 months; + No 'age of intro' / An 'Age of intro' < 6 months
		Partial	The product label uses words or phrases that may, directly or indirectly, indicate that the product is suitable for use from birth; for infants younger than 6 months; for all infants; for the whole family including infants younger than 6 months; + An 'Age of intro' that is equal to or > 6 months
		No	The product label doesn't include any such words/phrases.
6	Does the product label include the following messages:		
6.1	An appropriate/recommended age for use of the product that is six months (180 days) or more.	Yes	Recommended age of introduction is from 6 months of age (180 days / the 7th month of life) or later.
		No	(1) Recommended age of introduction is before 6 months of age (180 days / the 7th month of life); **OR** (2) No age of introduction is specified.
6.2.1	The importance of exclusive breastfeeding for the first six months of life;	Yes	A message including all three of the following concepts: (a) exclusive; (b) breastfeeding; (c) first 6 months.
		No	No message
		Partial	A message including one or two of the three concepts: (a) exclusive; (b) breastfeeding; (c) first 6 months.
6.2.2	Is a recommendation regarding exclusive breastfeeding for the first six months of life weakened by a message regarding feeding practices for infants and young children?	Yes	A message is provided regarding feeding practices for infants and young children that contradicts, undermines, or offers an alternative to or implies an exception to the recommendation to exclusively breastfeed for the first six months of life.
		No	The recommendation to exclusively breastfeed for the first six months of life is not weakened by messages provided regarding feeding practices for infants and young children.
		NA	The answer to Question 6.2 is "No".

No.	Labeling practice questions:	Answers:	Criteria for choosing answers:
6.3.1	The importance of the addition of complementary foods from six months of age with continued breastfeeding up to two years or beyond;	Yes	A message including all three of the following concepts: (a) the addition of complementary foods from six months; (b) continued breastfeeding (after six months); (c) up to two years or beyond.
		Partial	A message including one or two of the three concepts.
		No	No message
6.3.2	Is a recommendation regarding complementary feeding weakened by a message regarding feeding practices for infants and young children?	Yes	A message is provided regarding feeding practices for infants and young children that contradicts, undermines, or offers an alternative to or implies an exception to the complementary feeding recommendation.
		No[a]	The complementary feeding recommendation is not weakened by a message regarding feeding practices for infants and young children.
		NA	The answer to Question 6.3 is "No".
6.4	Instructions for safe and appropriate preparation and use.	Yes	Label provides both of the following: (a) preparation and usage instructions; (b) at least one safety message (preparation or use).
		Partial	Label provides a) without b): (a) preparation and usage instructions; (b) at least one safety message (preparation or use)
		No	No instructions.
6.5	A recommendation to feed the product with a spoon. ***NOTE: Select 'Not applicable' for Tea/Juice/ Water/Milkshake powder AND Snacks / Finger Foods (excluding rusks that are used to make porridges)***	Yes	Recommendation to feed the product with a spoon.
		Partial	A **picture of a spoon** is used on the label.
		No	No recommendation (pictorial or text).
		NA	
6.6	A proposed daily ration/serving. (Or recommended number of servings per day and serving)?	Yes	Label provides both of the following: (a) a proposed daily ration (even if calculated) / recommended number of servings per day; AND (b) serving size.
		Partial	Label provides one of the following: (a) a proposed daily ration/recommended number of servings per day; OR (b) serving size.
		No	No proposed daily ration/recommended number of servings per day nor serving size.
6.7	Instructions for safe and appropriate storage?	Yes	Label provides instructions for storage.
		No	No storage instructions
6.8	Ingredients list?	Yes	
		No	
6.9	The nutrition composition /analysis of the product?	Yes	
		No	
6.10	Batch number?	Yes	
		No	
6.11	Best before date?	Yes	
		No	
7	Does the product label recommend feeding the product in a bottle?	Yes	The product label recommends/gives instructions for how to feed the product in a bottle.
		No	The product label makes no mention of bottle feeding.
8	Does the product label show an image of a feeding bottle?	Yes	
		No	
9	Does the product label recommend feeding the product in a soft or semi-soft form? ***Select 'Not Applicable' for all categories of products except Cereal/Porridge. Applies to rusks that are used to make porridges.***	Yes	Recommendation to feed the product in a soft or semi-soft or semi-solid or thick form (using these words).
		Partial	(1) No recommendation but uses **an image of the product heaped on a spoon.** (2) No recommendation but uses the words soft or semi-soft or semi-solid or thick to describe the product.
		No	(1) No recommendation nor images as described above. (2) Recommendations to feed the product in a liquid form.
		NA	For the following category of products: Gravy / Soup Mix; Tea / Juice / Water / Milkshake powder; Homogenised / Pureed food; Frozen / Fresh food; Snacks / Finger foods. Applies to rusks that are used to make porridges.

No.	Labeling practice questions:	Answers:	Criteria for choosing answers:
10	Does the product label recommend feeding the product in a liquid form? ***Select 'Not Applicable' for Gravy / Soup Mix; Tea / Juice / Water / Milkshake Powder.***	Yes	Recommendation to feed the product in a liquid form.
		Partial	No recommendation but uses **an image of the product pouring off the spoon**.
		No	No recommendation or image
		NA	For the following category of products: Gravy / Soup Mix; Tea / Juice / Water / Milkshake powder
11	Does the daily ration (or a recommended serving size combined with a recommended frequency of feeds per day) included on the product label exceed the recommended energy intake from complementary foods for a breastfed child provided below? **For products where an age of introduction is not provided, answer the question for all age categories.**		
11.1	6 - 8.9 months : 837 kJ/day (200 Kcal/day)	Yes	Greater than
		No	Less than
		Insufficient Information	No daily ration (nor a recommended serving size nor Energy content) provided.
		NA	Product not recommended for this age group (age of introduction from 9 months or older).
11.2	9 - 11.9 months : 1,255 kJ/day (300 Kcal/day)	Yes	Greater than
		No	Less than
		Insufficient Information	No daily ration (nor a recommended serving size nor Energy content) provided
		NA	Product not recommended for this age group (age of introduction from 12 months or older).
11.3	12 - 23.9 months : 2301 kJ/day (550 Kcal)	Yes	Greater than or equal to
		No	Less than
		Insufficient Information	No daily ration (nor a recommended serving size nor Energy content) provided
		NA	Product not recommended for this age group (age of introduction from 2 years or older).
12	Does the product label include a stipulated warning?	Yes	Warnings stating the health hazards/potential risks of inappropriate preparation, use and storage or advising against certain practices (preparation, use or storage).
		No	None
13	Does the product label include images of babies appearing to be older than six months of age?	Yes	Pictures of babies showing achievement of physical or developmental milestones clearly reached after six months of age: (a) Standing with assistance; (b) Hands-and-knees crawling; (c) Walking with assistance; (d) Standing alone; (e) Walking alone; (f) 2 teeth; (g) More than 2 teeth. (h) Peddling a tricycle (i) Running (j) Holding objects such as a spoon/cup and self-feeding (k) Kicking a ball (l) Standing on tip toes ***NB: If the label carries multiple images of children, ALL of the images have to qualify for one of the milestones (a) to (l) above before the answer 'YES' can be selected.***
		Unclear	Pictures of babies showing 'Milestones: Other / Unclear'. ***NB: If the label carries multiple images of children, select unclear if none of the images qualify for a 'No' answer, and at least one qualifies for an 'unclear' answer.***

No.	Labeling practice questions:	Answers:	Criteria for choosing answers:
		No	(1) Pictures of infants/young children showing physical or developmental milestones commonly associated with infants 0 to 6 months of age such as: (a) 1 tooth; (b) Holding a toy and shaking it; (c) Lying down; (d) Lying on stomach and pushing up to elbows; (e) No teeth; (f) Reclining; (g) Sitting with support; (h) Sitting without support; (2) Head shot of infant (including baby in mothers arms) with no physical or developmental milestones reached after 6 months displayed. (3) Heavily stylized image of a baby with no physical or developmental milestones reached after 6 months displayed. ***NB: If the label carries multiple images of babies, even if only one of the images displays an infant that fulfils points (1), (2) or (3) above, select NO.***
		NA	No images of infants/young children on the label
13.1	Does the product label include an image/ images of baby animals displaying physical or developmental milestones commonly associated with infants younger than six months of age?	Yes	Picture of a baby animal (e.g. a bear) displaying physical or developmental milestones commonly associated with infants younger than six months of age: Lying down; Lying on stomach and pushing up to elbows; Reclining; Sitting with support; Sitting without support.
		No	Any other image of a baby animal.
		NA	No image of a baby animal on the label.
14	In the case of manufacturers that produce both breast-milk substitutes and complementary foods, is the product labeled in a way that also promotes the company's infant or follow up formula by using similar: ❶ Color schemes or designs ❷ Names ❸ Slogans, mascots or other symbols as used for their infant formula or follow up formula brands?	Yes	Similarities in one or more of the listed elements.
		No	None of the listed similarities
		NA	Company doesn't sell infant formula/follow-up formula/breast-milk substitutes in the country.
14.1	In the case of manufacturers that produce both breast-milk substitutes and complementary foods, is the product labeled in a way that also promotes the company's breast-milk substitutes (e.g. infant or follow-up formula) by including pack-shots of such products on the label and/or directly referring to the company's IF/FUF/GUM? (e.g. to prepare the cereal with the manufacturers FUF)	Yes	Product contains front-of-pack shots of the manufacturers BMS. Product contains preparation instructions / infant feeding messages / claims that refer to the manufacturers BMS (IF/FUF/GUM)
		No	
		NA	Company doesn't sell breast-milk substitutes (e.g. infant formula or /follow-up formula)/BMS in the country.
14.2	In the case of manufacturers that produce both breast-milk substitutes and complementary foods, is there an invitation on the label to make contact (direct or indirect) with the company's marketing personnel?	Yes	E.g. "Contact our nutrition experts" or a web link to a company sponsored baby club or IYCF information/ education service. Does not include the provision of company contact details for the purpose of reporting product defects or quality issues. QR code & website are always considered an invitation to contact; needs to be checked with other label content.
		No	A customer care line, email address and postal address (without any other wording such as 'contact out nutrition experts') is considered to be company contact details for the purpose of reporting product defects or quality issues.
		NA	Company doesn't sell infant formula/follow-up formula/breast-milk substitutes in the country.

No.	**Labeling practice questions:**	**Answers:**	**Criteria for choosing answers:**
15	Does the product label make any nutrient content claims?	Yes	
		No	
16	Does the product label make any nutrient comparative claims?	Yes	
		No	
17	Does the product label make any nutrient function/other function claims?	Yes	
		No	
18	Does the product label make any reduction of disease risk claims?	Yes	
		No	

/ENDS

8.5 APPENDIX E:

LABELING PRACTICES CHECKLIST FOR COMMERCIALLY PRODUCED FOODS FOR GENERAL CONSUMPTION COMMONLY FED TO CHILDREN UNDER THE AGE OF TWO YEARS

No.	Labeling practice questions:	Answers:	Criteria for choosing answers:
1	Does the product label specify a recommended age/age range for use that is 24 months or older?	Yes	The label specifies a recommended age/age range for use that is 24 months or older; OR the label specifies that the product is not suitable for children under 24 months of age.
		No*	
2	Does the product label include phrases such as “from the start”; “for the whole family” or “first stage”?	Yes*	The product label uses phrases that may indicate that the product is suitable: for use from birth; for infants or children younger than 24 months; for the whole family (including infants and young children).
		No	
3	Does the product label contain any words or a product description that indicate that it is suitable for a child?	Yes*	The label contains (a) words used to describe a child (e.g. baby; toddler; child; children; kid; kidz etc.); (b) words indicating that the product is intended for a child or a child’s party/religious festival (e.g. school; lunchbox; “Hey Moms!”; “Barbie’s pinktastic play time cupcake mix”; chocolate eggs for “Easter Egg hunts” etc.); AND/OR phrases pertaining to developmental stages of children (e.g. “finger food”; “for teethers” etc.).
		No	
4	Does the product label show an image of babies or children? (that appear to be under 2 years old)	Yes*	There is a photograph, drawing or any other graphic representation of a baby or a child.
		No	
5	Does the product label recommend feeding the product from a feeding bottle?	Yes*	The product label recommends/gives instructions for how to feed the product in a bottle.
		No	The product label makes no mention of bottle feeding.
6	Does the product label show an image of a feeding bottle?	Yes*	The product label contains an image (photograph/drawing/graphic representation) of a baby feeding bottle.
		No	
7	Does the product label show an image of a real person, such as a celebrity or sport’s star, that has appeal to children?	Yes*	E.g. Hannah Montana, famous soccer player, wrestler, etc.
		No	The product label does not contain an image of a real person known to have appeal to children OR the product label does contain a photo of a real person, but it is not someone with known appeal to children (e.g. a politician, health professional or a chef endorsing a product).
8	Does the product label show an image of a cartoon character or fictional movie character that has appeal to children?	Yes*	The product label shows an image of a cartoon character (e.g. Mickey Mouse, Disney characters, Dora the Explorer, Scooby-Doo, etc.) AND/OR a fictional movie character (e.g. Shrek, Spiderman) that has known appeal to children.
		No	
9	Does the product label show an image of a brand mascot that has specific appeal to children?	Yes*	E.g. Kellogg’s Frosties’ Tony the Tiger, Simba the lion, Nik Nak man, Oros man, Nesquik bunny.
		No	
10	Does the product label contain any representation of fantasy or adventure themes that has appeal to children?	Yes*	E.g. “Unreal world” on Manhattan Gums; “Exotic fruit” flavored ice on Paddle Pop label; “Let the Hunt Begin” on packaging of an Easter Egg; “Rock your world with a starburst of extra delicious, cheesy, moon, star and planet chips” on the Cosmix sweet milk cheese flavor packet.
		No	
11	Does the product label contain information about or an image of a free gift, toy or collectible item with appeal to children?	Yes*	E.g. free stickers, figurines, trading cards – that may or may not be in a set or part of a greater collection; Kinder joy chocolate egg with toy inside.
		Partial	
		No	
12	Does the product label show an image of a toy?	Yes	E.g. a plane, car, teddy bear, balloons, space ship, dinosaurs, bright balls toy animals on the Zoo biscuits packaging, soccer ball on Frostie’s box.
		No*	

No.	Labeling practice questions:	Answers:	Criteria for choosing answers:
13	Are any colors, shapes or designs used on the **product label** that has particular appeal to children?	Yes*	There are bright colors or shapes (such as circles, triangles, etc.) on the product label that would have particular appeal to children (e.g. the blue, red and yellow circles on Flings packaging).
		No	
14	Does the product label contain or refer to a competition, voucher or game with appeal to children?	Yes*	E.g. puzzles, crosswords, join the dots, SMS or go to a website to enter a competition, voucher for a toy store etc. (including tokens, discounts, promotions)
		No	
15	Does the product label contain a joke, rhyme or short story with appeal to children?	Yes*	E.g. Manhattan's (sweet packet) gum baby sweets with a story about Kylie the Kangaroo on the back panel; Anything implying humor.
		No	
16	Does the **product packaging** have a particular shape, or does the product label show that the **food** contained has a particular shape, that has appeal to children?	Yes*	E.g. a cool drink/sweetened beverage that is packaged in a prism-shaped tetrapak (such as Jabba sippy orange drink) or Mickey Mouse head shaped packaging, chips that are dinosaur-shaped, mickey-mouse shaped biscuits / cakes, biscuits with animals on them or animal shaped biscuits.
		No	
17	Does the product have a physical appearance, texture or any other novelty (not identified from any other questions) that would have specific appeal to children?	Yes*	E.g. Flings on the back label states that "Flings are so amazingly light and melty."
		No	
18	Does the product label indicate a flavor that would specifically appeal to children?	Yes*	E.g. marshmallow, bubblegum, cream soda, chocolate potion, strawberry whizz etc.
		No	The product label does not indicate a flavor OR it indicates a flavor (chocolate, vanilla, strawberry) that could appeal to adults and children.
19	Are there any emotive claims (e.g. implying "fun") or statements on the product label that are directed towards children or their caregivers?	Yes*	The product label contains a claim regarding "fun" (e.g. "Bursting with Fun") AND/OR there is information on the product label that implies that a parent who purchases the product is a better, more intelligent, more caring or more generous than a parent who does not (e.g. "we understand that you only want the best for your children…"). E.g: Special, exciting, surprise, your favorite.
		No	
20	Does the product label indicate that the product is portioned in, for example, "mini" or "bite size" portions?	Yes*	E.g. "mini" cheddars/oreos, "bite size" chocolates, "snack bites", "baby" etc.
		No	
21	Does the product label indicate that the product can be adapted to be suitable for a child?	Yes*	E.g. rusks: "mash with milk for young children".
		No	
22	Does any information on the product label imply that a balanced and varied diet cannot provide adequate nutrients to growing children?	Yes*	E.g. "Because parents lead such busy lifestyles, it is difficult to ensure that your child's diet contains all the nutrients they need to grow. Give your child x product daily to ensure that their nutrient needs are met."
		No	
23	Does the product label include warnings that are specifically intended for children?	Yes*	Warnings stating the health hazards/potential risks of inappropriate preparation, use or storage, or advising against certain practices (preparation, use or storage) specifically if used for a young child (e.g. choking hazard, "Mom, don't allow your children to roast marshmallows unsupervised" on the marshmallows label, don't allow consumption unsupervised, etc.).
		Partial	
		No	None of the listed similarities appear on the packaging.
		NA	
24	Is the product labeled in a way that also promotes the company's breast-milk substitutes or complementary foods by using similar (a) Color schemes or designs, (b) Names, (c) Slogans, mascots, logos or other symbols, as	Yes	There are similarities in one or more of the listed elements.
		NA	The company doesn't sell breast-milk substitutes or complementary foods in this country.
		No	

No.	Labeling practice questions:	Answers:	Criteria for choosing answers:
	used for breast-milk substitutes/complementary food brands?		
25	Does the product label include a portion / serving size?	Yes	
		No	
26	Does the product label provide nutrition information as a percentage RDA/NRV/GDA for children younger than 2 years of age?	Yes	
		No	The product label provides nutrition information with a % RDA for children >4yrs (e.g. Fanta Pineapple)
27	Does the product label make any nutrient content claims?	Yes*	E.g. “free from trans fats”; “a source of B vitamins & iron”.
		No	
28	Does the product label make any nutrient comparative claims?	Yes*	
		No	
29	Does the product label make any nutrient function/other function claims?	Yes*	E.g. “Amazing B vitamins thiamine, riboflavin and niacin help release the energy in foods”.
		No	
30	Does the product label make any reduction of disease risk claims?	Yes*	
		No	
31	Does the product label make any other claims (excluding nutrition/health claims) that imply suitability for a child?	Yes*	E.g. “easy to digest for small tummies”.
		No	
32	Is the product label written in the appropriate language(s) of the country in which the product is sold?	Yes	
		No	
33	Does the product label include the following:		
33.1	Ingredients list?	Yes	
		No	
33.2	The nutrition composition/analysis of the product?	Yes	
		No	
33.3	Batch number?	Yes	
		No	
33.4	Best before date?	Yes	
		No	
35	Is there an invitation on the label to make contact (direct or indirect) with the company’s marketing personnel?	Yes	
		No	
36	**Country specific Cambodia** For sweetened condensed milk/ skimmed milk/other similar products: Does the product label contain a clear, conspicuous warning that the product should not be used to feed IYC?	Yes	
		No	
37	**Country specific Nepal** For sweetened condensed milk: Does the product label contain a clear and legible caution that it should not be used for infant feeding?	Yes	
		No	

/ENDS

8.6 APPENDIX F:

INSERTS DEFINITION

The Code (WHO, 1981) states that “Inserts giving additional information about the product and its proper use, subject to the above conditions, may be included in the package or retail unit.” The conditions referred to are regarding information that must be provided on the product label. In the spirit of the Code, *Using the Code of Marketing of Breast-milk Substitutes to Guide the Marketing of Complementary Foods to Protect Optimal Infant Feeding Practices* recommendations (Table 1) were interpreted to mean that an insert containing additional information may be included in the package or retail unit on condition that the information required to be on the product label is not found only in the insert. *Using the Code of Marketing of Breast-milk Substitutes to Guide the Marketing of Complementary Foods to Protect Optimal Infant Feeding Practices* (Quinn, et al., 2010) recommendations are not interpreted as checking that the required label information is present on the label (dealt with by Questions 4, 7, 12 and 13). As such, the wording of the question was adjusted from the original text to more clearly deal with the issue of prime interest, being whether the insert contains any required label information that is not present on the label.

For the purposes of this report, “required label information” was defined as including:

1. Age of introduction;
2. Message regarding the importance of exclusive breastfeeding for the first six months followed by the addition of complementary foods with continued breastfeeding for two years and beyond; preparation/use instructions;
3. Storage instructions;
4. Daily ration (or serving size and frequency of feeds);
5. Warnings;
6. Ingredients list;
7. Nutrition information;
8. Batch number; and
9. Best before date. Although not stipulated as required label information by *Using the Code of Marketing of Breast-milk Substitutes to Guide the Marketing of Complementary Foods to Protect Optimal Infant Feeding Practices* (Quinn, et al., 2010), the last four items listed are required for breast-milk substitutes by the Code (WHO, 1981). Thus it is felt that, should this information be provided for a complementary food product, it too should be found on the label and not only in the insert.

/ENDS

8.7 APPENDIX G:

MACRO-AND MICRONUTRIENT NUTRIENT RECOMMENDATIONS FOR INFANTS AND YOUNG CHILDREN

Macro-and micronutrient nutrient recommendations			
Age group	6-8 months	9 – 11 months	12 – 23 months
Energy (kcal)[a]	200	300	550
CHO (g)[b]	18 – 23	26 - 34	48 - 62
Fat (g)[c]	10 - 12	15 - 18	28 – 34
PUFA (g)[c]	<3	<5	<9
LA (g)[c]	0.7 – 1.0	1.0 – 1.5	1.8 – 2.8
ALA (g)[c]	0.08 – 0.13	0.13 – 0.20	0.24 – 0.37
Protein 2 (g)[d]	8.9	8.4	8.8
Weight (kg)[e]	7.9	8.8	10.3
Sodium (mg)[f]	350		
Sugar (g)[g]	<5		
Vitamin A (µg)[h]	400		
Calcium (mg)[h]	400	400	500
Iron (mg)[h]	9	9	6
Zinc (mg)[h]	4.1	4.1	4.8

[a]Pan American Health Organisations (PAHO), World health organization (WHO). Guiding principles for complementary feeding the breastfed child.
http://www.who.int/nutrition/publications/guiding_principles_compfeeding_breastfed.pdf
[b]Recommendation of 35-45% of energy http://www.fao.org/docrep/w8079E/w8079e00.htm
[c]Recommendation for total fat: 45 – 55% of energy
PUFA; 6-24 months: <15% of total E
LA 6; – 24 months: 3.0 – 4.5% of total E
ALA; 6 – 24 months: 0.4 – 0.6% of total E
FAO/WHO. 2010. Fats and fatty acids in human nutrition: Report of an expert consultation.
http://www.fao.org/docrep/013/i1953e/i1953e00.pdf

[d]WHO/FAO/UNU. 2007. Protein and amino acid requirements in human nutrition. Report of joint WHO/FAO/UNU Expert consultation. http://whqlibdoc.who.int/trs/WHO_TRS_935_eng.pdf
[e]The weight for age according to the WHO growth standards was used, an average between the weight of boy and girls was used.
http://www.who.int/childgrowth/standards/cht_wfa_boys_p_0_2.pdf
http://www.who.int/childgrowth/standards/chts_wfa_girls_p/en/index.html
[f]WHO Guideline Sodium Intake for Adults and Children:

- Children 2 to 5 years the maximum level of 2 g/d should be adjusted downward adjusted on energy requirements of children relative to adults. Specifically states that this guideline does not cover children birth to 24 months
- The 1998 WHO report on Complementary Feeding of Young Children in Developing Countries: a Review of the Current Scientific Evidence recommends .35 g for infants < 24 months of age.

[g]PAHO in a technical document Recommendations from a Pan American Health Organization Expert Consultation on the Marketing of Food and Non-Alcoholic Beverages to Children in the Americas recommends that foods with total sugars: ≤ 5.0 gr / 100 gr of solid food or ≤ 2.5 gr / 100 ml of beverage should not be marketed to children.
http://www.paho.org/saludyescuelas/index.php?option=com_k2&view=item&id=225:recommendations-on-the-marketing-of-food-and-non-alcoholic-beverages-to-children&Itemid=337&lang=en . These guidelines are not specific to young children < 24 months of age.

[h]FAO (Food and Agriculture Organization of the United Nations)/WHO (World Health Assembly). 2001. Human Vitamin and mineral requirements. Report of a joint FAO/WHO expert consultation Bangkok, Thailand. ftp://ftp.fao.org/docrep/fao/004/y2809e/y2809e00.pdf

/ENDS

8.8 APPENDIX H:

CLAIMS PROVIDED ON LABELS OF COMMERCIALLY PRODUCED COMPLEMENTARY FOOD PRODUCTS IN NEPAL

Table 8-1 Nutrient content claims used on commercially produced complementary food labels (n=20).

Nutrient content claims	Number of labels	Percentage of labels	Example text from labels
Protein	13	65	*Pulses are a good source of vegetarian protein*
Energy	9	45	*[Product name] is the highly nutritious food and high energy health food for all age group from 6 months onwards during illness*
Calcium	7	35	*Calcium + Vitamin D*
Iron	7	35	*Iron/Zinc*
Vitamin C	7	35	*Source of Vitamin C*
Essential fatty acids	6	30	*[Product name] contains Essential Fatty Acids (ALA and LA), iodine and vitamin A*
Vitamin A	6	30	*Vitamin A + Vitamin C*
Vitamin D	6	30	*Calcium + Vitamin D*
Vitamins	6	30	*Nutritious food-full of protein and vitamins*
Zinc	6	30	*3 Serves of [product name] provides approximately 75% of RDA of important immunonutrients like zinc, vitamin A and vitamin C.*
Vitamins and minerals	5	25	*[Product name] is a pre-cooked, easy-to-digest weaning cereal packed with essential vitamins and minerals that are important for your baby's development*
Iodine	3	15	*[Product name] contains Essential Fatty Acids (ALA and LA), iodine and vitamin A*
Minerals	3	15	*11 Minerals*
Amino acids	1	5	*Product formulated as per the requirement of essential amino acid for the children.*
Fiber	1	5	*Required percentage of fiber is present in the product*
Prebiotics	1	5	*Zinc, iron, iodine, calcium, vitamins, prebiotics*
RDA/DRI/NRV	1	5	*Daily recommended dietary allowances for infants and children [table provided]*

Table 8-2 Nutrient function/other function/implied health claims used on commercially produced complementary food labels (n=21).

Claims	Number of labels	Percentage of labels	Example text from labels
Nutrition / Nutritious (including nutrient-dense)	13	62	*This Lito is a nutritious, tasty and precooked food, made under the most hygienic conditions untouched by human hands.* *We've carefully tailored this recipe to be nutritious and yummy for your baby.* *Each serving is nutrient dense and suitable for the baby's small tummy.*
Easy to digest	11	52	*The Z Line Process in [product name] breaks the carbohydrates into smaller easier to digest components.* *The first introduction to solid food that is easy to digest and gentle on baby's stomach.* *This Lito is a semi solid food for your baby and is* easy to digest*; Good digestibility and acceptability.*
Immunity	11	52	*Aids in developing immune system / Essential to building immunity: Vitamin A, Vitamin C, Vitamin E, Selenium, Zinc, Copper, Vitamin B6, Folic Acid.* *With added micro nutrients for you baby's overall growth, energy needs and immunity.* *Suitable for weaning for extra stamina and for use in sickness.* *[Product name] is highly nutritious, immune inhensar and energatic health food. (Exactly how is written on product)*
Benefit / Beneficial (including important, essential)	9	43	*Each serve of [product name] provides the goodness of cereal with 18 important nutrients.* *Cereal & milk, [product name] provides the combined benefit of cereal and milk.* *[Product name] is a pre-cooked, easy-to-digest weaning cereal packed with essential vitamins and minerals that are important for your baby's development.*
Growth	9	43	*Growth Nutrients. [Product name] is energy dense and contains important growth nutrients like Protein, Calcium and vitamin D. Protein is important for healthy growth and development.* *Today [manufacturer's name] continues that pioneering, heritage by developing scientifically advanced nutrition to address the needs of growing children all over the world.* *This Lito provides proteins, essential vitamins and minerals specially formulated for your baby's healthy growth in every feed.*
Goodness / Good	8	38	*Good food, good life.* *This Lito combines the natural goodness & nutritive values of wheat, soyabean, rice & milk to provide balanced and essential nutrients to the child in every feed.*
Development	7	33	*[Product name] is a pre-cooked, easy-to-digest weaning cereal packed with essential vitamins and minerals that are important for your baby's development.* *Feed daily to your baby for physical development good health and healthy growth of mind.*
Protein function	7	33	*[Product name] is energy dense and contains important growth nutrients like Protein, Calcium and vitamin D. Protein is important for healthy growth and development.*
Brain / Mental	6	29	*Facilitates physical and mental development: Protein, Linoleate, Iron, Iodine, Riboflavin, Vitamin B12, Choline*
Calcium function	6	29	*Calcium and Vitamin D help build healthy bones.* *For growth and development of strong bones: Calcium, Phosphorus, Vitamin D, Magnesium.*
Energy function	6	29	*For energy needs; carbohydrate, fat, thiamine, niacin, pantothenic acid, vitamin B12, Biotin.*

Claims	Number of labels	Percentage of labels	Example text from labels
Health	6	29	*This will grow your child's muscles, increase strength and grow up healthy. If lactating mother keeps feeding on [product name] mother's milk will be nutritious and make the child healthy and strong.* *Nutritious Food. [Product name] is the highly nutrition food and high energy health food for all age group from five months onwards during illness.*
Vitamin A function	6	29	*Immunonutrients 3 serves of [Product name] provide approximately 75% of RDA of important immunonutrients like iron, zinc, vitamin A and vitamin C. Immunonutrients help support the immune system.*
Vitamin D function	6	29	*For growth: energy, protein, calcium, vitamin D, riboflavin, folic acid.*
Bones	5	24	*Calcium and vitamin D help to build healthy bones.* *Protein, Linoleate, Iron, Iodine, Riboflavin, Vitamin B12, Choline For growth and development of strong bones.*
Carbohydrates (including sugar) function	5	24	*For energy & growth: Energy, carbohydrates, sugar, protein, fat, saturated fatty acid, monounsaturated fatty acid, polyunsaturated fatty acid, linoleic acid, trans fatty acids, calcium & vitamin D.*
Essential fatty acids function	5	24	*[Product name] contains Essential Fatty Acids (ALA and LA), iodine and vitamin A. ALA (Omega 3 fatty acid) and LA (Omega 6 fatty acid) are the precursors of DHA and ARA. ALA (Omega 3 fatty acid) contributes to brain development.*
Iodine function	5	24	*Facilitates physical and mental development: Protein, Linoleate, Iron, Iodine, Riboflavin, Vitamin B12, Choline*
Iron function	5	24	*For Immunity; vitamin A, vitamin E, vitamin B6, vitamin C, iron, zinc.* *Facilitates physical and mental development. Protein, Linoleate, Iron, Iodine, Riboflavin, Vitamin B12, Choline.*
Vitamin C function	5	24	*Immunonutrients 3 Serves of [product name] provides approximately 75% of RDA of important immunonutrients like zinc, vitamin A and vitamin C. Immunonutrients help support the immune system.*
Vitamin E function	5	24	*Other important components: Phosphorus, copper, sodium, potassium, chloride, Thiamin (B1) Riboflavin (B2), niacin, Pantothenic acid, vitamin B6, Biotin, Folic Acid, Vitamin B12, Vitamin E, Dietary Fibre.* *Aids in developing immune system / Essential to building immunity. Vitamin A, Vitamin C, Vitamin E, Selenium, Zinc, Copper, Vitamin B6, Folic Acid.*
Zinc function	5	24	*Immunonutrients: Iron, zinc, vitamin C & vitamin A.*
Branded process[a]	5	24	[a]*The Z Line Process in [product name] breaks the carbohydrates into smaller easier to digest components.*
Acceptance of table food / texture	4	19	*As the baby progresses from Stage 1 through to Stage 3, [product name] offers tastes and textures, while helping develop a well-balanced nutritious eating habit; Good digestibility and acceptability.*
Balanced	4	19	*This Lito combines the natural goodness & nutritive values of wheat, soyabean, rice & milk to provide balanced and essential nutrients to the child in every feed.*
B Vitamins (includes B vits not captured elsewhere, i.e. all others except B_1) function	4	19	*Facilitates physical and mental development. Protein, Linoleate, Iron, Iodine, Riboflavin, Vitamin B12, Choline. Aids in developing immune system / Essential to building immunity. Vitamin A, Vitamin C, Vitamin E, Selenium, Zinc, Copper, Vitamin B6, Folic Acid.* *For growth; energy, protein, calcium, vitamin D, riboflavin, folic acid. For energy needs; carbohydrate, fat, thiamine, niacin, pantothenic acid, vitamin B12, Biotin. For Immunity; vitamin A,*

Claims	Number of labels	Percentage of labels	Example text from labels
			vitamin E, vitamin B6, vitamin C, iron, zinc.
Fat (includes saturated fat, MUFA, PUFA, etc.) function	4	19	*For energy & growth: Energy, carbohydrates, sugar, protein, fat, saturated fatty acid, monounsaturated fatty acid, polyunsaturated fatty acid, linoleic acid, trans fatty acids, calcium & vitamin D.*
Phosphorous function	4	19	*Other important components. Phosphorus, copper, sodium, potassium, chloride, Thiamin (B1) Riboflavin (B2), niacin, Pantothenic acid, vitamin B6, Biotin, Folic Acid, Vitamin B12, Vitamin E, Dietary Fibre.*
Vitamin B_1 function	4	19	
Copper function	3	14	
Choline function	3	14	*Facilitates physical and mental development. Protein, Linoleate, Iron, Iodine, Riboflavin, Vitamin B12, Choline*
Magnesium function	3	14	*For growth and development of strong bones. Calcium, Phosphorus, vitamin D, Magnesium.*
Palate / Taste development	3	14	*As the baby progresses from Stage 1 through to Stage 3, [product name] offers tastes and textures, while helping develop a well-balanced nutritious eating habit*
Selenium function	3	14	*Aids in developing immune system / Essential to building immunity. Vitamin A, Vitamin C, Vitamin E, Selenium, Zinc, Copper, Vitamin B6, Folic Acid.*
Transforming food to energy	3	14	*Release of energy from food: healthy nervous system: Energy, carbohydrates, sugar, total fat, thiamin, niacin, pantothenic acid, biotin.*
Vitamins and minerals function	3	14	*[Product name] is a pre-cooked, easy-to-digest weaning cereal packed with essential vitamins and minerals that are important for your baby's development.*
Best for babies/ best start/Better for	2	10	*With this plan [product name] provides the baby with the right nutrition and eating experience during infancy.*
Name: Sub brand is a function	2	10	*e.g. Savottam/Sarbottam = 'super flour' or 'the very best flour'*
Strength (including stamina)	2	10	*Suitable for weaning for extra stamina and for use in sickness.*
Vision	2	10	*Brain & Vision Nutrients: [Product name] contains Essential Fatty Acids (ALA and LA), iodine and vitamin A. ALA (Omega 3 fatty acid) and LA (Omega 6 fatty acid) are the precursors of DHA and ARA. ALA (Omega 3 fatty acid) contributes to brain development. Iodine helps in normal development of brain cognition. Vitamin A contributes to healthy vision.*
Name: Brand is a function	1	6	*Santulit = Balanced.*
Gentle / Mild	1	5	*Gentle first food The first introduction to solid food that is easy to digest and gentle on baby's stomach.*
Micronutrient function	1	5	*With added micro nutrients for you baby's overall growth, energy needs and immunity.*
Dietary Fiber function	1	5	*Other important components. Phosphorus, copper, sodium, potassium, chloride, Thiamin (B1) Riboflavin (B2), niacin, Pantothenic acid, vitamin B6, Biotin, Folic Acid, Vitamin B12, Vitamin E, Dietary Fibre.*
Potassium function	1	5	
Sodium function	1	5	

Table 8-3 Non-nutrition claims used on commercially produced complementary food labels (n=19)

Claims	Number of labels	Percentage of labels	Example text from labels
Vegetarian	14	74	*100% veg; Suitable for vegetarians; [Vegetarian green dot symbol]*
Additives	11	58	*Free from added artificial colours, flavours and preservatives.*
Quality	5	26	*Manufactured and packed under excellent quality controlled environment and with latest technologies.* *Quality our first priority, consumer satisfaction our success.*
Certification: Safety / Quality	1	5	*License received from department of food technology and quality control.*
Packaging	1	5	*Now more quality and in a new attractive pack.*
Protein sources	1	5	*[Product name] Shishu Aahaar provides the combined benefit of cereals and pulses. Cereals and pulses complement each other and their combination is usually a part of traditional Indian diet.*
Safe	1	5	*This Lito is a nutritious, tasty and precooked food, made under the most hygienic conditions untouched by human hands.*
Specially prepared	1	5	*We've carefully tailored this recipe to be nutritious and yummy for your baby.*

/ENDS

8.9 APPENDIX I:

CLAIMS PROVIDED ON LABELS OF COMMERCIALLY PRODUCED FOODS FOR GENERAL CONSUMPTION COMMONLY FED TO CHILDREN UNDER THE AGE OF TWO YEARS IN NEPAL

Table 8-4 Nutrient content claims used on commercially produced foods for general consumption commonly fed to children under the age of two years (n = 9).

Nutrient content claims	Number of labels	Percentage of labels	Example text from labels
Calcium	4	44	*Good to remember: [Manufacturer & product name] is a source of Protein and Calcium, essential nutrients for you at all stages of life.* *BONES: Calcium: Provides your child the building blocks of healthy bones and teeth especially during the growing years.*
Vitamin B_2	3	33	*100% RDA of Nutrients [Vitamin B2, B6, B12, Folic Acid, Vitamin C, Iron and Calcium in 2 servings as per WHO 2004 Guidelines]*
Protein	3	33	
Folic Acid /Folate	2	22	
Iron	2	22	
Energy	2	22	*Provides energy.*
Vitamin B_6	2	22	*100% RDA of Nutrients [Vitamin B2, B6, B12, Folic Acid, Vitamin C, Iron and Calcium in 2 servings as per WHO … 2004 Guidelines].*
Vitamin C	2	22	
Vitamins and minerals	2	22	*Added vitamins and minerals.*
Fat	1	11	*Low in fat*
Phosphorus	1	11	*Phosphorous*
Trans fat	1	11	*Hydrogenated vegetables fat use - contains trans fats.*
Vitamin A	1	11	*[Product name] is a source of Vitamins A, B2, B3, B6, Folate and C which are among the recommended nutrients need for their daily activities.*
Vitamin B_3 / Niacin	1	11	
Vitamin B_1	1	11	*Vitamin B1.*
Vitamin B_{12}	1	11	*100% RDA of Nutrients [Vitamin B2, B6, B12, Folic Acid, Vitamin C, Iron and Calcium in 2 servings as per WHO … 2004 Guidelines].*
Vitamin D	1	11	*[Product name] Extra refined, high grade [branded ingredient] is enriched with the goodness of vitamin D and Calcium for extra quick replenishment of essential vitamin, minerals and nutrients.*
Vitamins	1	11	*Full of vitamins too.*

Table 8-5 Nutrient function/other function/implied health claims used on commercially produced foods for general consumption commonly fed to children under the age of two years (n = 9).

Claims	Number of labels	Percentage of labels	Example text from labels
B Vitamins function	4	44	*[Product name] is a source of Vitamins A, B2, B3, B6, Folate and C which are among the recommended nutrients need for their daily activities.*
Iron function	4	44	*Iron fuels blood formation that supports normal energy production; BRAIN: Iron: helps brain development and transport of oxygen to your child's brain*
Vitamin A function	4	44	*Vit A: Supports good eyesight.* *Healthy Blood: Iron Vit C, Vit A.*
Growth	4	44	*Stage 2: A nutrition packed health food drink for active, growing pre-schoolers; It's perfect for growing children and sports persons; Improves 5 signs of growth [indicates to clinically proven scientific symbol]:*
Immunity	4	44	*BODY: Vitamin A: Helps keep your child's immune system healthy and helps maintain good eyesight.*
Transforming food to energy	4	44	*Vit B Complex: Releases energy from food.* *Vitamin B2, B6, B12, Biotin, Niacin: Helps release of energy from food.*
Bones	3	44	*More bone area; Healthy Bones: Calcium, Vit D, Phosphorous.*
Brain/Mental	3	44	*BRAIN: Iron: helps brain development and transport of oxygen to your child's brain; Better Concentration.* *Brain development and its functions: Iodine, Vit B6, B12, Folic acid, carbohydrates, sugar.*
Calcium function	3	44	*Healthy Bones: Calcium, Vit D, Phosphorous.*
Vitamin C function	3	44	*Vit C: Strengthens immune system.*
Benefit/beneficial	2	22	*Is a Guardian: Provides essential nutrients.*
Blood	2	22	*Folate: Stimulates normal blood formation. Healthier blood*
Copper function	2	22	*Vitamin C, Zinc, Vitamin E, Vitamin A, Selenium, Copper: Aids healthy immune system.*
Energy function	2	22	*Carbohydrates, Sugar, Energy, Fat, SFA, MUFA, PUFA, TFA, Cholesterol: Provides energy.*
Fat function	2	22	*Energy and its metabolism: Fat, B1, B2, Niacin, Biotin, Pantothenic acid, Magnesium, Energy, zinc.*
Iodine function	2	22	*DHA, Iron, Folic Acid, Iodine: Aids brain development and function.*
Protein function	2	22	*Calcium, Vitamin D, Vitamin K, Pantothenic Acid, Protein: Supports physical growth and development.*
Vitamin D function	2	22	
Selenium function	2	22	*Vitamin C, Zinc, Vitamin E, Vitamin A, Selenium, Copper: Aids healthy immune system; Normal function of immune system: Vit E, selenium, copper.*
Vitamin E function	2	22	
Zinc function	2	22	*Energy and its metabolism: Fat, B1, B2, Niacin, Biotin, Pantothenic acid, Magnesium, Energy, zinc.*
Health	2	22	*Stage 1: An easy to digest health drink food specially formulated for toddlers.* *Stage 2: A nutrition packed health food drink for active, growing pre-schoolers.*
Muscle/tissue	2	22	*Vitamin B1 & B2 Helps build energy aids body growth and keeps heart and muscles in good shape.* *More muscles. Healthy muscles & their function: Protein, Potassium.*
Vision	2	22	*Vit A: Supports good eyesight.*
Acceptance of table food/texture	1	11	*Now the great taste of [Product name] is power-packed with Vitamins and Minerals to health develop your child's*

Claims	Number of labels	Percentage of labels	Example text from labels
Development	1	11	*brain, body and bones.*
Cooking method	1	11	*Not fried*
Digestive health /Intestinal flora	1	11	*[Product name] is manufactured by a unique process which helps to easy to digest as it breaks down carbohydrates and proteins in a way that mimics human digestive processes.*
Easy to digest	1	11	*Stage 1: An easy to digest health drink food specially formulated for toddlers.*
Electrolyte balance	1	11	*Fluid and electrolyte balance: Sodium, chloride*
Fatigue/ tiredness	1	11	*Drinking [product name] regularly refreshes and energises you, helping fight tiredness and fatigue caused by the summer heat.*
Good/Goodness	1	11	*Not just fruit taste… but real fruit goodness.*
Iron absorption	1	11	*Iron fuels blood formation that supports normal energy production.*
Teeth	1	11	*BONES: Calcium: Provides your child the building blocks of healthy bones and teeth especially during the growing years.*
Wisdom	1	11	*Yoghurt for Health and Wealth*
DHA function	1	11	*DHA, Iron, Folic Acid, Iodine: Aids brain development and function.*
Magnesium function	1	11	*Energy and its metabolism: Fat, B1, B2, Niacin, Biotin, Pantothenic acid, Magnesium, Energy, zinc.*
Potassium function	1	11	*Healthy muscles & their function: Protein, Potassium.*
Phosphorus function	1	11	*Phosphorus: Helps in bone and teeth formation as well as metabolic actions in the body including kidney function and cell growth.*
Vitamin K function	1	11	*Calcium, Vitamin D, Vitamin K, Pantothenic Acid, Protein: Supports physical growth and development.*
Vitamins and minerals function	1	11	*Now the great taste of [Product name] is power-packed with Vitamins and Minerals to help develop your child's brain, body and bones.*

Table 8-6 Non-nutrition claims used on commercially produced foods for general consumption commonly fed to children under the age of two years (n=32).

Non-nutrition claims	Number of labels	Percentage of labels	Example text from labels
Vegetarian	22	69	*A quality product you can trust forever, 100% vegetarian; Vegetarian [symbol]; Pure vegetarian*
Additives	19	59	*No preservatives, MSG, artificial colours; Contains added flavour (nature identical & artificial (five star) flavouring substances)*
Allergens	9	28	*Contains wheat, soya, milk, sulphites. May contain traces of peanuts and nuts. Allergy warning: Peanut nuts and milk traces may be present.*
Natural	6	19	*Contains added natural flavouring substances; Contains permitted natural colour.*
Trust	2	6	*Made with trusted kitchen ingredients.*
Certification: Religious	2	6	*Halal [symbol].*
Quality	2	6	*A quality product you can trust forever, 100% vegetarian.*
Non-vegetarian	2	6	*Brown circular symbol.*
Real/authentic	1	4	*Real ingredients.*
Other	1	4	*Proprietary food; for wealth; optimal ingredients and not fried*
Fruit juice	1	4	*Not just fruit taste… but real fruit goodness.*
Pure	1	4	*Pure vegetarian*

/ENDS