Towards healthy and sustainable first-food systems and universal breastfeeding: informing the food systems transformation agenda

Getting food systems right from the start: how they are failing young children and what we can do about it?

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# The food systems transformation agenda



...and at least 50 such reports published since 2016

### Sustainable food systems – where does infant & young child feeding fit in?

A sustainable food system "...ensures food security and nutrition for all in such a way that the economic, social and environmental bases to generate food security and nutrition of **future generations** are not compromised" (FAO, 2018)

#### The components of an enabling environment for breastfeeding—a conceptual model



Rollins, N. C., Bhandari, N., Hajeebhoy, N., Horton, S., Lutter, C. K., et al. (2016). Why invest, and what it will take to improve breastfeeding practices? The Lancet, 387(10017), 491-504.



UNICEF, GAIN. Food systems for children and adolescents. Working together to secure nutritious diets. New York: UNICEF; 2019





# **First-food systems** are the food systems that provision foods for infants and young children (0-36 months), and that structure feeding practices at the population-level

### Main components of first-food systems;

- 1. Mother-child attributes e.g. age, socio-economic status, confidence
- 2. Basic drivers e.g. income growth, urbanization, women's work, globalization
- 3. First-food supply chains e.g. breastfeeding, breastmilk; commercial supply chains
- 4. First-food environments e.g. healthcare; workplaces; retail; community settings
- 5. Governance, policy & regulatory frameworks e.g. maternity protection, marketing
- 6. Actors, interests and power e.g. governments, baby food industry, civil society

### Some questions this framework helps answer;

- Why did global breastfeeding rates plummet in the mid- to late 20th century, more so in some countries than in others?
- What's driving the global rise in breastmilk substitution now underway, especially in East and Southeast Asia?
- What explains the resurgence in breastfeeding we're now observing in some countries, but not in others?



### What are first-foods?

WHO recommends exclusive breastfeeding from birth to 6 months of age, and thereafter the introduction of complementary foods while breastfeeding continues up to two years of age or beyond.

### **Biological / normative first-foods Breastmilk**

- Breastmilk from the mother
- Breastmilk from another lactating women
- Breastmilk from a donor milk or milk bank -
- Breastmilk from a commercial supplier

### **Complementary foods**

Home-made 'specially prepared' or usual 'family foods'

- Unprocessed and minimally processed foods
- Processed complementary foods

### **Commercial / novel first-foods Breastmilk substitutes**

'...any milks (or products that could be used to replace milk, such as fortified soy milk), in either liquid or powdered form, that are specifically marketed for feeding infants and young children up to the age of 3 years'

### **Commercial complementary foods**

'...all commercially produced foods and beverages that are marketed as suitable for feeding infants and young children aged 6-36 months'

- Processed complementary foods
- Ultra-processed complementary foods

### **Ultra-processed foods not marketed for infants** and young children, but often consumed by them





Commercial milk formulas (CMF)

- Standard infant formula (0-6 months)
- Follow-up infant formula (7-12 months)
- Toddler / growing-up milks (GUMs) (13-36 months)
- Specialised formulas



### The mother-child breastfeeding dyad

### The biological 'first-food supply chain'

- An on-demand global food production system, and arguably the shortest food supply chain on Earth, unparalleled in safety
- Delivering optimal nutrients and immunological factors, evolving from feedto-feed, and responsive to the child's evolving needs
- A crucial food source in LMICs average breastmilk intake at 12-23 months is ~550 g/day or ~35-40% of child's energy needs
- Literally 'packaged with love' breastfeeding fosters mother-child bonding and reduces stress for both
- Help the mother to regain her pre-birth weight, and contributes to birthspacing and family planning
- Highly sustainable, requiring only small amounts of additional food

### **Other breastmilk supply chains;**

- The breastmilk of another lactating woman (wet-nursing)
- Donor breastmilk and milk banks
- Informal milk sharing networks
- Commercial breastmilk supply chains (commodification)



#### ...where sustainable food systems begin

Yet according to UNICEF estimates, worldwide just;

- 49% of newborns initiate breastfeeding in first hour
- 44% are exclusively breastfed to 6 months
- 44% continue to breastfeed at 2 years of age



### The global rise of commercial milk formulas An unprecedented first-food supply chain transformation?

### **CMF** markets have grown markedly;

- Invented in 1860s to serve a legitimate social need  $\rightarrow$ transformed into a mass-produced consumer good
- From US\$1.5 billion in 1978  $\rightarrow$  US\$4 billion in 1983  $\rightarrow$ US\$22 billion in 2005  $\rightarrow$  \$55.6 billion in 2019
- Displacement of the dyad as the biological first-food supply-chain  $\rightarrow$  commercial supply chains, across a widening scope of mother-child populations
- Likely unprecedented in scale has occurred mostly in highly-populated middle-income countries

Baker, Phillip, Thiago Santos, Paulo Augusto Neves, Priscila Machado, Julie Smith, Ellen Piwoz, Aluisio JD Barros, Cesar G. Victora, and David McCoy. "First-food systems transformations and the ultra-processing of infant and young child diets: The determinants, dynamics and consequences of the global rise in commercial milk formula consumption." Maternal & child nutrition 17, no. 2 (2021): e13097.



Rollins, Nigel C., Nita Bhandari, Nemat Hajeebhoy, Susan Horton, Chessa K. Lutter, Jose C. Martines, Ellen G. Piwoz, Linda M. Richter, Cesar G. Victora, and The Lancet Breastfeeding Series Group. "Why invest, and what it will take to improve breastfeeding practices?." The Lancet 387, no. 10017 (2016): 491-504.



### The global rise of commercial milk formulas Wide variation between regions and countries at similar levels of economic and social development

CMF sales (kg) per infant/child by UNICEF region, 2005– 2019, with projections to 2024



Barros, Cesar G. Victora, and David McCoy. "First-food systems transformations and the ultra-processing of infant and young child diets: The determinants, dynamics and consequences of the global rise in commercial milk formula consumption." *Maternal & child nutrition* 17, no. 2 (2021): e13097.

In low- and middle-income countries, CMF consumption strongly and

formula consumption is positively correlated with wealth, within and between countries: a multi-country study. The Journal of Nutrition, 150(4), 910-917.

# The hyper-globalization of commercial milk formula markets

Country milk formula production values (circles) and exports (arrows) in US\$, 2005 vs. 2017



Baker, P., Russ, K., Kang, M., Santos, T. M., Neves, P. A., Smith, J., ... & McCoy, D. (2021). Globalization, first-foods systems transformations and corporate power: a synthesis of literature and data on the market and political practices of the transnational baby food industry. *Globalization and health*, *17*(1), 1-35.

### ...with 45+ ingredients, arguably among the world's longest and most complex supply chains

# **Commercial milk formulas**

# What are the implications for sustainable first-food systems?

### Implications for child and maternal health

'Bottle-baby food syndrome'

- A cycle of diarrhoea, dehydration and malnutrition from 'artificial feeding in less than ideal conditions' reported since early-1900s.

- "Safe" use of BMS requires certain conditions are met; but never absolutely safe 'Not-breastfeeding' (Victora et al, 2016);

- Increases child's risks of diarrhoea, respiratory infection, malocclusion, and all-cause mortality, and very likely obesity and type-2 diabetes.
- Increases mother's risk of breast and ovarian cancer, and type-2 diabetes.
- Near universal breastfeeding would save an estimated 823,000 deaths in children under-5 years of age, and 98,000 maternal deaths every year.

Food security

- Disruptions to physical supply; changes in household economic status
- **Emergencies and sustained crises**

### **Implications for sustainable economic development**

- Generates economic losses of US\$341.3 billion annually, resulting from higher health care costs, premature mortality and lost productivity
- Diverts from sustainable forms of household expenditure

### **Implications for the environment**

- Wasted resources follow-up and toddler milks are superfluous to human need
- Greenhouse gas emissions
- Water pollution (from dairy)
- Waste from packaging, bottles and teats

WHO has long maintained that follow-up and toddler milks are unnecessary and unsuitable as replacements for continued breastfeeding – there are 'discretionary' products superfluous to human need

World Health Organization

Date: 17 July 2013

Information concerning the use and marketing of follow-up formula

#### The use of follow-up formula

The World Health Organization (WHO) recommends th exclusively breastfed for the first six months of life to achieve op development and health. Mothers should continue to breastfeed beyond the age of six months, until they are two years of age or olde time providing them with safe and appropriate complementary their evolving nutritional requirements.

In 1987, the Codex Alimentarius Commission defined followfollow-on milk - as "a food intended for use as a liquid part of the w the infant from the 6th month on and for young children.

WHO maintains, however, that breast milk remains the mo liquid part of a progressively diversified diet for the vast majority of ch 6 and 24 months of age, once complementary feeding has begun. More children who, for various reasons, are not breastfed, or for whom bre stop before the recommended duration of two years or beyond, a sources exist.

In 1986, the World Health Assembly stated that "the practice be in some countries of providing infants with specially formulated m 'follow-up milks') is not necessary"4.

The Organization further maintains that as well as being unnec up formula is unsuitable when used as a breast-milk replacement from age onwards. Current formulations lead to higher protein intake and I essential fatty acids, iron, zinc and B vitamins than those recommende adequate growth and development of infants and young children<sup>2,5,6,7,8,9</sup>,

#### **INFORMATION NOTE**

#### Clarification on the classification of follow-up formulas for children 6-36 months as breastmilk substitutes

The International Code of Marketing of Breast-milk Substitutes<sup>1</sup> was adopted by the World Healt Assembly to protect and promote breastfeeding by ensuring the appropriate marketing and distribution of breast-milk substitutes. The Code did not specify an age range for products that should be considered breast-milk substitutes, but it did indicate that infant formula was only one type of breast-milk substitute. In 2016, the WHO published guidance<sup>2</sup> to clarify that breast-mill substitutes "should be understood to include any milks (or products that could be used to replace milk, such as fortified soy milk), in either liquid or powdered form, that are specifically marketed for feeding infants and young children up to the age of 3 years (including follow-up formula and growing-up milks)." This Information Note describes the rationale for this interpretation.

#### Breastfeeding for at least two years improves child survival and the health of mothers and babies

The aim of the International Code is to protect breastfeeding from the influences of inappropriate marketing of breast-milk substitutes. WHO and UNICEF recommend breastfeeding be continued for up to two years or beyond<sup>3</sup>. There are a number of reasons breastfeeding in the second year of life is important:

Reduced mortality. Continued breastfeeding in the second year of life protects against mortality. In a 2015 meta-analysis<sup>4</sup>, Sankar es that examined the mortality effect of breastfeeding vs. not breastfeeding at 12-23 months of age (Figure 1). The pooled relative risk was 1.97 (1.45-2.67) times higher mortality in the

non-breastfed children (total n=17.761) This means that children who are not reastfed at 12-23 months of age are about twice as likely to die as those who are breastfed in the second year of life.



Improved nutrition. Breastmilk make important and unique contributions to the dietary intake of young children in the





### First-food environments – the crucial role of health systems

### Where the breastfeeding dyad begins – but too often broken

- The over-medicalisation of pregnancy, birthing and post-natal care is a major challenge for breastfeeding
- Multiple studies report breastfeeding knowledge and skills deficits among healthcare professionals, limited consideration in medical curricula, and apathy in hospital settings
- In-hospital feeding of infant formula, including the use of pre-lacteal feeds, is widely practiced, associating with early breastfeeding cessation
- Health systems are also a key BMS marketing channel, with formula marketed directly to healthcare professionals for many decades

### **Baby Friendly Hospitals Initiative**

Launched by WHO/UNICEF (1991) to promote, protect and support breastfeeding;

- BFHI has had a significant positive effect on exclusive breastfeeding rates at national and global levels
- Yet as of 2016, just 10% of newborns were born in 'baby friendly' designated facilities; major funding deficits

#### a national BFHI programme:

- professional standards of care.
- Ensure the competency of health implementation of the Ten Steps.
- 4. Utilize external assessment system Ten Steps.
- Develop and implement incentive compliance with the Ten Steps.
- 6. Provide technical assistance to fa the Ten Steps.
- 7. Monitor implementation of the initia
- the initiative.

Countries are called upon to fulfill nine key responsibilities through

 Establish or strengthen a national breastfeeding coordination body. 2. Integrate the Ten Steps into relevant national policy documents and

8. Advocate for the BFHI to relevant Identify and allocate sufficient reso



#### **Sponsoring health professional associations**

Number of paediatric associations receiving financial support



make breast-milk substitutes: evidence from a review of official websites. BMJ Open. 2019;9.

### First-food environments – mother's work

Breastmilk substitutes are often the only choice, when mothers are forced to choose between their job / livelihoods and breastfeeding

### Maternity protection & supportive workplaces

- Systematic review of 25 studies in 19 countries, found maternal employment a key barrier to exclusive breastfeeding (Balogun et al. 2015)
- Length of maternity leave post-partum and time of return to work is associated with longer BF duration
- Yet the vast majority of employed mothers (68%) lack effective maternity protection (2014 ILO data); just 35.3% are legally entitled to cash benefits
- Coverage is extremely poor in countries with large informal sectors

### Valuing mother's milk

- Baby food sales get counted in national accounting systems, contributing to GDP
- However, the immense value that mother's render society by breastfeeding, is typically invisible to economic decision-makers; it simply does not get 'counted'
- Economic output measures, including GDP, are strongly biased against women's reproductive, health and economic rights



Feminist Economics 11(1), March 2005, 41-62

MOTHERS' MILK AND MEASURES OF ECONOMIC OUTPUT

ulie P. Smith and Lindy H. Ingham

ughtful economists have long been aware of the limitations of national ng and GDP in measuring economic activity and material well-being roductive work in measures of economic production. This paper examines he treatment of human milk production in national accounting guidelines. Human milk is an important resource produced by women. Significant ternal and child health costs result from children's pr onto formula or solid food. While human milk production meets the standard national accounting criteria for inclusion in GDP, current practice is to ignore its significant economic value and the substantial private and public health costs of commercial breastmilk substitutes. Economic output measures such as GDP thus are incomplete and biased estimates of national food production and overall economic output, and they distort policy priorities to the disadvantage of women and children.



### First-food environments – the power of commercial marketing

#### **Strategy 1 Medical marketing**

### SINFLUENCE ON BRAND DECISIO ded to her by her doctor, whom she consulte Nestlé Nutritic 6000 **E-Learning Programs**

#### Strategy 2 **Direct-to-consumer advertising**



### **Re-claiming first-food environments – implementing The Code**

- As of 2020, 136 (70%) of 194 countries had at least some provisions of International Code of Marketing of Breast-milk Substitutes adopted into national law (WHO/UNICEF/IBFAN)
- However just 25 (13%) had laws 'substantially aligned' with The Code; and 58 (30%) had adopted no provisions into law whatsoever

Exposure to such marketing reduces breastfeeding initiation, duration and exclusivity, irrespective of context

### Strategy 3 **Product strategies**





- Of countries with provisions in law;
- 79 (41%) covered promotion in health facilities
- 51 (26%) provision of free or low-cost supplies
- 19 (10%) health professional sponsorship
- 114 (59%) restricted advertising to general public
- 112 (58%) pictures or text idealizing formula
- 50 (26%) nutrition and health claims



### Actors, interests and power within first-food systems

### How the baby food industry maintains its power to market



### Actors, interests and power within first-food systems

The power of 'evidence-based advocacy...to generate the necessary political will to enact legislation and policies to protect, promote, and support breastfeeding' (Pérez-Escamilla et al.)



WORLDWIDE AGENDA n a landscape analysis on political commit

nes to protect, promote and support breastfeeding







### Actors, interests and power within first-food systems

### The incredible untapped power of mothers







y





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Lesley Oot, Alive & Thrive June 9<sup>th</sup>, 2021 Contributions: Karin Lapping and Frances Mason

Alive & Thrive

**Fixing the Broken Food System – Why Addressing the** Marketing of Commerical Milk Formula is Critical









# HLPE Food System Framework



Alive & Thrive



### How the Commercial Milk Formula Industry and Regulatory Policies Influence Breastfeeding and the First-Food System

**Aggressive marketing** by the commercial formula milk industry has an impact on food environments, consumer behaviour, and diets.

The commercial formula milk industry has an impact on **climate change** with an estimated 4 kgs of greenhouse gases emitted for every kilogram of formula milk produced.



Alive & Thrive

**Family-friendly policies**, like paid maternity leave, influence consumer behavior and play a key role in supporting breastfeeding practices.



# What is Commercial Milk Formula

- They are an ultra processed food source
- Foods marketed or otherwise represented as partial or total replacements for breastmilk, including any milk drinks marketed for ages 0–36 months
- Categories include:
  - Standard infant formula (0-6 months)
  - Follow-up formula (7-12 months)
  - Growing-up (or toddler) milks
  - Milks (13-36 months)
  - Specialized formulas



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#### Examples of CMF sold in China

Photo Credit: The Times UK

# Why Care About Breastfeeding?

- Breastmilk is the optimal first food providing all the nutrients and water babies need to survive and thrive; evolving over time to fit the needs of the baby as it grows – something formula simply cannot do.
- Substantial and well-known global evidence regarding the benefits of breastfeeding in reducing morbidity and mortality.
- Benefits to cognitive development, translating to higher intelligence levels, greater educational attainment and productivity.
- Investing in breastfeeding protection and promotion is a best bet for governments and the private sector.



# **Breastfeeding is More Environmentally Friendly** than the Alternative

- Breastfeeding is a low waste/low resource food; with the shortest food chain: Mother to child.
- Breastfeeding is **better for the environment** and climate than commercially produced milk formula products
  - CMF production utilizes valuable natural resources and can degrade the environment
  - CMF production is a significant contributor to green house gases
  - CMF products are often packaged in nonrecyclable or reusable materials



# A Mother Rarely Makes the Decision to Breastfeed Alone..



Conceptual Framework from the 2016 Lancet Series on Breastfeeding (Rollins et al. 2016)

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# How Does the CMF Industry Sell Their Products

- **Traditional media** advertise in magazines, radio, television, billboards, and in stores
- **Product innovation and cross-promotion** utilize a large range of products to create brand recognition
- Social media and digitals platforms advertise products and infiltrate parenting groups
- **Utilize trusted sources -** health workers to promote and provide products
- **Sponsor health professional events** creating conflicts of interest
- Associate themselves with public health authorities, philanthropy, and scientific research to gain legitimacy and social standing
- **Prey upon crises and emergencies** utilize fear to sell and donate products in the guide of humanitarian aid
- **Enact political pressure** utilize lobbying and political clout to influence policies and regulations

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WHO TĂNG COVID-19 LÊ

Parents receive free CMF samples at a hospital in Vietnam



A Colosbaby advertisement in Vietnam featured the WHO Director-General headshot with the caption "The world is entering a decisive moment when coronavirus disease is spreading more rapidly." And then next to the products were captions "Colosbaby Boost immune system" and "prevent respiratory and digestive infections caused by viruses and bacteria"

Photo credit: Ching et al. 2021. Old Tricks, New Opportunities: How Companies Violate the International Code of Marketing of Breast-Milk Substitutes and **Undermine Maternal and Child Health during the COVID-19 Pandemic** 



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# Why Care About the CMF Industry and Their Marketing Practices

- The CMF Industry "Big Formula" is massive and rapidly expanding.
- More formula is being produced than children to consume it.
- Formula can be harmful it displaces breastmilk and when promoted in contexts with poor water and sanitation, its use can be deadly.
- Babies who are exclusively breastfed are **14 times less likely to die** than babies who are not breastfed.



![](_page_25_Picture_8.jpeg)

# The International Code of the Marketing of Breastmilk Substitutes

### When implemented effectively, the Code works

![](_page_26_Figure_2.jpeg)

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![](_page_26_Picture_4.jpeg)

Source: Data from Euromonitor International Passport Global Market Information database

# **Recommended Actions**

Action track 1: Ensure access to safe and nutritious food for all

- Governments, donors, and the private sector need to ensure women have access to quality breastfeeding counselling and services.
- Governments and the private sector need to provide breastfeeding-friendly workplaces and ensure adequate paid parental leave (<u>at least</u> <u>14 weeks</u>).
- Governments, donors, and implementers need to develop solutions to address the lack of maternity protections.

![](_page_27_Picture_6.jpeg)

# **Recommended Actions**

### Action Track 2: Shift to sustainable consumption patterns

- **Governments** need to incorporate the Code and its subsequent resolutions into their laws and regulations and monitor and enforce the Code.
- Stakeholders need to demand CMF companies publicly commit to full compliance with the Code.
- Governments and stakeholders need to increase public awareness and understanding of the Code.
- **Stakeholders** need to raise awareness around the impact of CMF production and consumption on food security, climate change, and the environment.
- Stakeholders need to conduct additional research on the impact of CMF on the climate and the environment.

![](_page_28_Picture_8.jpeg)

![](_page_29_Picture_0.jpeg)

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Visit our new webpage dedicated to the Code: <u>BMS code (aliveandthrive.org)</u>

> The Alive & Thrive initiative, managed by FHI Solutions, is currently funded by the Bill & Melinda Gates Foundation, Irish Aid and other donors.

![](_page_29_Picture_5.jpeg)

### vvelcome You to

![](_page_29_Picture_7.jpeg)

![](_page_29_Picture_8.jpeg)

![](_page_29_Picture_9.jpeg)

![](_page_29_Picture_10.jpeg)

![](_page_29_Picture_11.jpeg)

### Making First Foods Count

UNICEF's programming approach and the importance of ending inappropriate promotion of foods for infants and young children

Jo Jewell Nutrition Specialist

Contributions: Aashima Garg, Grainne Moloney, Holly Rippin and Kremlin Wickramasinghe

![](_page_30_Picture_4.jpeg)

# Child Malnutrition Today

At least **1 in 3 children** is not growing well

because of malnutrition

#### At least 1 in 2 children

children suffers from deficiencies in essential micronutrients

### At least 2 in 3 children

are not fed the minimum diet they need to grow healthy.

![](_page_31_Picture_7.jpeg)

![](_page_31_Picture_8.jpeg)

# Child Malnutrition Today

Further, **new forces** are driving the triple burden of child malnutrition and threatening to reverse historic gains

![](_page_32_Picture_2.jpeg)

### Globalization

![](_page_32_Picture_4.jpeg)

Urbanization

![](_page_32_Picture_6.jpeg)

Inequities

![](_page_32_Picture_8.jpeg)

Climate change

![](_page_32_Picture_10.jpeg)

<sup>™</sup> Humanitarian crises

![](_page_32_Picture_12.jpeg)

Health epidemics

![](_page_32_Picture_14.jpeg)

![](_page_32_Picture_15.jpeg)

# Nutrition Strategy 2020-2030

### **UNICEF's Goal**

To protect and promote diets, services and practices that support optimal nutrition, growth and development for all children, adolescents and women

Supports the goal of the **2030 Agenda for Sustainable Development** to ensure children's access to nutritious diets and to end child malnutrition in all its forms. for every child

![](_page_33_Figure_5.jpeg)

Caregiver knowledge Caregiver time Household dynamic Social norms

Health, water and sanitation and social protection

### Improving young children's diets requires a systematic analysis and a systems approach

### **Action Framework to Improve the Diets of Young Children During the Complementary Feeding Period**

![](_page_34_Figure_2.jpeg)

https://www.unicef.org/documents/improving-young-childrens-diets-during-complementary-feeding-period-unicef-programming

### Working with the Food System

![](_page_35_Picture_1.jpeg)

#### Improving the quality of complementary foods

- National dietary guidelines and standards on complementary foods
- Fortified complementary foods and LSFF
- Food **supplements**  $\bullet$ MNPs, SQ-LNS

2.

- ullet
- $\bullet$

### Improving food environments for young children

• Healthy food and water- public sector policies and programmes

**Food marketing** restrictions

Food labelling legislation

### 3.

Improving the complementary feeding practices

- **Counselling** and communication
- Large-scale  $\bullet$ multichannel social and behaviour change communication
- Hygiene and care ulletpractices

## Implementing the recommendations of WHA 69.9

- In 2010, World Health Assembly called on Member States to "end inappropriate promotion of food for infants and young children"
- In 2016, WHA "welcomed with appreciation" the WHO Guidance on Ending the **Inappropriate Promotion of Foods for Infants** and Young Children (*Resolution 69.9*)
- Purpose is to:
  - ✓ protect breastfeeding
  - prevent obesity and noncommunicable diseases  $\checkmark$
  - promote a healthy diet
  - $\checkmark$  clear and accurate information on feeding

![](_page_36_Picture_10.jpeg)

### Implementing the recommendations of WHA 69.9

#### **Recommendation 3:**

Products should only be promoted if they **meet** all the relevant national, regional and global standards for composition, safety, quality and nutrient levels and are in line with national dietary guidelines.

Nutrient profile models should be developed and utilized to guide decisions on which foods are inappropriate for promotion.

**Relevant Codex standards and guidelines** should be updated and additional guidelines **developed** in line with WHO's guidance to ensure that products are appropriate for infants and young children, with a particular focus on avoiding the addition of **free sugars and salt**.

### **Recommendation 4:**

The **messages** used to promote foods for infants and young children should support optimal feeding and inappropriate messages should not be included

#### *Include* messages:

Appropriate age of introduction of food (not <6 months)

Importance of continued breast feeding up to 2 years of age

#### *Not include messages that:*

- Undermine/ discourage breast feeding
- Compare product to breast milk
- Endorsements of products

### The increase in commercial complementary foods

![](_page_38_Picture_1.jpeg)

- 40-60% of infants and young children consuming products
- Contribute a significant proportion of total energy and sugar intake

#### DOI: 10.1111/mcn.12764

#### SUPPLEMENT ARTICLE

WILEY Maternal & Child Nutrition

High proportions of children under 3 years of age consume commercially produced snack foods and sugar-sweetened beverages in Bandung City, Indonesia

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Abstract Child undernutrition continues to be a national concern in Indonesia, whereas childhood overweight/obesity rises. Economic development has led to wide availability of highly processed foods and beverages, with growing evidence that children are consuming commercial snack products during the critical complementary feeding period. This study assessed the prevalence and patterns of consumption of commercially produced snack foods and sugar-sweetened beverages among Indonesian children. A cross-sectional survey was conducted with 495 mothers of children aged 6-35 months living in Bandung City, Indonesia. Among all children, 81.6% consumed a commercial snack food and 40.0% consumed a sugar-sweetened beverage in the day preceding the interview. At 6-11 months, 46.5% of children consumed a snack food and 2.0% consumed a sugar-sweetened beverage. Snack foods were consumed 3 or more times a day by 60.0% of children 24-35 months of age. Sweet biscuits and savory snacks were the most commonly consumed snack foods; sweetened milks and veetened teas were the most common beverages. Maternal education, child age, and consumption of a commercially produced complementary food were associated with snack food consumption. Factors associated with sugar-sweetened beverage consumption were child age and consumption of a commercially produced complementary food or breastmilk substitute. These findings reflect a high presence of processed, high-sugar/salt commercial snack products in the diets of children 6-35 months. National attention should focus on interventions to reduce reliance on processed snack products and increase consumption of nutrient-rich, locally available foods during the complementary feeding period.

KEYWORDS

child feeding, complementary feeding, double burden, Indonesia, snack food, sugar-sweetened beverage

 Between 37 – 50% of infants and young children had consumed a commercially produced complementary food in the previous day.

# What are some of the issues with commercial complementary foods?

- Many product marketed from 4+ months
- Purées have high free sugar and total sugar content
- Many products contain added sugars or sweetening agents
- Predominantly sweet flavours, even in "savoury foods"
- Often mask vegetable flavours with fruit
- Often puréed/ limited texture to fit through spout
- Misleading product names/content
- Emotive and misleading marketing/packet messages
- Snack and confectionery products widely available

![](_page_39_Picture_10.jpeg)

### Alarming results from WHO/European region

- In all countries, a substantial proportion of products (up to 60%) were marketed as being suitable for infants under the age of 6 months
- Around half or more of products had >30% total energy from sugars and more than four in 10 products had >40% total energy from sugars
- Widespread use of claims/statements regarding nutrition and composition
- Lack of nutrition information on many labels

![](_page_40_Picture_5.jpeg)

### Elements proposed by WHO/European model

- State age of introduction
- State importance of continued breastfeeding
- No products for infants <6 months
- No images, text or other representation that suggest use for infants <6 months
- No cross promotions (packaging, design, labelling) to BMS
- Suckable pouches should carry disclaimer
- No sweet snacks/confectionery products should be permitted
- "Savoury" snacks >15% total sugar should not be marketed as suitable
- No added sugars or other sweetening agents
- If total sugar exceeds certain thresholds, consider "flag" on front of pack
- Use of fruit puree should be limited
- Sodium should be limited, TFAs banned
- No claims, no endorsements

![](_page_41_Picture_14.jpeg)

Ending inappropriate promotion of commercially available complementary foods for infants and young children between 6 and 36 months in Europe

![](_page_41_Picture_16.jpeg)

A discussion paper outlining the first steps in developing a nutrient profile todel to drive changes to product composition and labelling and promotion practices in the WHO European Region

![](_page_42_Picture_0.jpeg)

# THANK YOU!

![](_page_42_Picture_2.jpeg)

![](_page_43_Picture_0.jpeg)

# **PROTECTING YOUNG CHILD DIETS IN THE FACE OF UNHEALTHY FOOD** ENVIRONMENTS

Alissa Pries Senior Research Advisor, ARCH Project June 9, 2021

![](_page_43_Picture_3.jpeg)

hki.org

![](_page_43_Picture_5.jpeg)

![](_page_43_Picture_9.jpeg)

### THE COMMERCIAL REALITY OF INFANT AND YOUNG CHILD FEEDING...

![](_page_44_Picture_1.jpeg)

![](_page_44_Picture_2.jpeg)

![](_page_44_Picture_3.jpeg)

![](_page_44_Picture_4.jpeg)

**Breast-milk** substitutes

![](_page_44_Picture_6.jpeg)

![](_page_44_Picture_7.jpeg)

### **HELEN KELLER** INTL

(i.e. 'junk food')

foods

![](_page_44_Picture_11.jpeg)

### **TRANSITIONING FOOD SYSTEMS**

Trends and patterns in per capita packaged food category sales by region, 2005-2017

![](_page_45_Figure_2.jpeg)

Reference: Development Initiatives, 2018. 2018 Global Nutrition Report: Shining a light to spur action on nutrition. Bristol, UK: Development Initiatives.

### **HELEN KELLER** INTL

![](_page_45_Picture_8.jpeg)

### **TRANSITIONING FOOD SYSTEMS**

Proportion of packaged food products by country meeting Health Star Rating of 3.5 or more (threshold for 'healthy')

![](_page_46_Figure_2.jpeg)

Reference: Development Initiatives, 2018. 2018 Global Nutrition Report: Shining a light to spur action on nutrition. Bristol, UK: Development Initiatives.

![](_page_46_Picture_8.jpeg)

### **CONTRIBUTION OF UNHEALTHY FOODS TO YOUNG CHILD TOTAL ENERGY INTAKES (TEI)**

Authors	Setting	Age (months)	%TEI
Anderson et al. (2008)	Cambodia (urban)	12-23	38.2%
Denney et al. (2017)	Mexico (national)	6-23	16.1%
Jeharsae et al. (2011)	Thailand (conflict setting)	12-23	19.3%
Karnopp et al. (2017)	Brazil (urban)	0-23	19.7%
Kavle et al. (2015)	Egypt (peri-urban/rural)	6-23	14.1%
Lander et al. (2010)	Mongolia (urban)	6-23	36.2%
Pries et al. (2019)	Nepal (urban)	12-23	24.5%
Roche et al. (2011)	Peru (rural)	0-23	13.1%
Rodríguez- Ramírez et al. (2016)	Mexico (national)	6-23	$\sim 20\%$
Valmórbida and Vitolo (2014)	Brazil (urban)	12-16	13.6%
Webb et al. (2006)	Australia (national)	16-24	26.5%

Reference: Pries AM, Filteau S, Ferguson EL. Snack food and beverage consumption and young child nutrition in low- and middle-income countries: A systematic review. Maternal and Child Nutrition, 15(Suppl 4): DOI: 10.1111/mcn.12729, 2019.

### **HELEN KELLER** INTL

![](_page_47_Picture_4.jpeg)

# WHAT DOES THIS MEAN FOR YOUNG CHILD NUTRITION?

- Excessive energy intakes and risk of over-nutrition among older children
- Studies indicating diet displacement of other nutritious foods
  - \_
  - including calcium, iron and zinc (Pries et al., 2019)
- Limited evidence for young child nutritional outcomes
  - Particular concern in settings where nutrient adequacy is limited

Reduced intakes of calcium, zinc, and vitamin A among Australian 16-24 mth olds (Webb et al., 2006)

Greater proportion of 12-23 mth olds in Nepal at risk of dietary inadequacy for 8 micronutrients,

The Journal of Nutrition Community and International Nutrition

#### **Unhealthy Snack Food and Beverage Consumption Is Associated with Lower Dietary Adequacy and Length-for-Age z-Scores** among 12–23-Month-Olds in Kathmandu Valley, Nepal

Alissa M Pries,<sup>1,2</sup> Andrea M Rehman,<sup>2</sup> Suzanne Filteau,<sup>2</sup> Nisha Sharma,<sup>3</sup> Atul Upadhyay,<sup>3</sup> and Elaine L Ferguson<sup>2</sup>

![](_page_48_Picture_17.jpeg)

![](_page_48_Picture_18.jpeg)

![](_page_48_Picture_19.jpeg)

### WHAT IS DRIVING CONSUMPTION?

- Convenience
- Palatability
- Affordability
- Marketing

Received: 11 April 2018	Revised: 18 Septemb
OOI: 10.1111/mcn.12711	

#### SUPPLEMENT ARTICLE

### Perceptions of commercial snack food and beverages for infant and young child feeding: A mixed-methods study among caregivers in Kathmandu Valley, Nepal

Nisha Sharma<sup>1</sup> 💿 | Elaine L. Ferguson<sup>2</sup> 💿 | Atul Upadhyay<sup>1</sup> 💿 | Elizabeth Zehner<sup>1</sup> 💿 | Suzanne Filteau<sup>2</sup> I Alissa M. Pries<sup>1,2</sup>

![](_page_49_Picture_9.jpeg)

The Journal of Nutrition **Community and International Nutrition** 

### The Relative Caloric Prices of Healthy and **Unhealthy Foods Differ Systematically across Income Levels and Continents**

Derek D Headey and Harold H Alderman

International Food Policy Research Institute, Washington DC, USA

Accepted: 20 September 2018

WILEY Maternal & Child Nutrition

![](_page_49_Picture_17.jpeg)

![](_page_49_Picture_19.jpeg)

### **MARKETING: MASS MEDIA ADVERTISING**

### Proportion of mothers of children 6-23 months observing promotions

![](_page_50_Figure_2.jpeg)

Reference: Pries AM, Huffman SL, et al. Consumption of commercially produced snack foods and sugar-sweetened beverages during the complementary feeding period in four African and Asian urban contexts. *Maternal and Child Nutrition*, 13(Suppl 2): DOI: 10.1111/mcn.12412, 2017.

![](_page_50_Picture_5.jpeg)

### MARKETING: LABELLING CLAIMS

![](_page_51_Picture_1.jpeg)

![](_page_51_Picture_2.jpeg)

"Packed with fruit goodness"

![](_page_51_Picture_4.jpeg)

"Contains protein, calcium, vitamin D"

### **HELEN KELLER** INTL

1-2-3 NOODLES

all 100 grants of Bridge

"Enriched with vitamins + minerals"

### "So healthy"

![](_page_51_Picture_10.jpeg)

![](_page_51_Picture_11.jpeg)

### **PROTECTING INFANT AND YOUNG CHILD DIETS FROM INAPPROPRIATE MARKETING...**

![](_page_52_Picture_1.jpeg)

International Code of Marketing of Breast-milk Substitutes

![](_page_52_Picture_3.jpeg)

World Health Organization Geneva

![](_page_52_Picture_5.jpeg)

### ) HELEN KELLER INTL

![](_page_52_Picture_8.jpeg)

(d) World Health Organization

**EMENTALION** 

![](_page_52_Picture_12.jpeg)

![](_page_52_Picture_13.jpeg)

![](_page_52_Picture_14.jpeg)

![](_page_52_Picture_15.jpeg)

**Other commercial** processed foods (ex. junk food)

![](_page_52_Picture_18.jpeg)

### **PROTECTING YOUNG CHILDREN'S DIETS**

### • Nutrient profiling

- Front-of-pack warnings —
- **Consumer awareness**
- Reformulation

### Advertising restrictions

Caregiver and potentially young child influence

### • Fiscal policy solutions

I. BMC Medicine (2020) 18:20 https://doi.org/10.1186/s12916-019-1477-4

#### **BMC Medicine**

**Open Access** 

#### **RESEARCH ARTICLE**

### Reductions in sugar sales from soft drinks in the UK from 2015 to 2018

![](_page_53_Picture_12.jpeg)

L. K. Bandy<sup>1\*</sup>, P. Scarborough<sup>1</sup>, R. A. Harrington<sup>1</sup>, M. Rayner<sup>1</sup> and S. A. Jebb<sup>2</sup>

#### **HELEN KELLER** INTL

![](_page_53_Picture_15.jpeg)

![](_page_53_Picture_16.jpeg)

Received: 13 January 2019	Revised: 27 March 2019	Accepted: 29 March 201
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DOI: 10.1111/obr.12868

PUBLIC HEALTH

WILEY **obesity**reviews

#### Impact of sugar-sweetened beverage taxes on purchases and dietary intake: Systematic review and meta-analysis

Andrea M. Teng<sup>1</sup> | Amanda C. Jones<sup>1</sup> | Anja Mizdrak<sup>1</sup> | Louise Signal<sup>1</sup> | Murat Genç<sup>2</sup> | Nick Wilson<sup>1</sup>

![](_page_53_Picture_23.jpeg)

![](_page_53_Picture_24.jpeg)

![](_page_54_Picture_0.jpeg)

# HELEN KELLER INTL ASSESSMENT & RESEARCH ON CHILD FEEDING

### **THANK YOU!**

![](_page_54_Picture_4.jpeg)