Khulisa Management Services (Pty) Ltd

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BREASTFEEDING PROMOTION
CASE STUDY REPORT

Diagnostic/Implementation Evaluation of Nutrition Interventions for Children from Conception to Age 5

South Africa Department of Performance Monitoring and Evaluation (DPME)
Nutrition SLA 12/0287

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This report has been independently prepared by Khulisa Management Services (Pty) Ltd. The Evaluation Steering Committee comprises the Presidency, Department of Performance Monitoring and Evaluation in the Presidency, The Department of Health, the Department of Social Development, the Department of Agriculture, Forestry, and Fisheries, and UNICEF. The Steering Committee oversaw the operation of the evaluation, commented and approved the reports.

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LIST OF ABBREVIATIONS AND ACRONYMS

AFASS	Acceptable, Feasible, Affordable, Sustainable and Safe
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
APP	Annual Performance Plan
ARV	Antiretroviral
ATNI	Access to Nutrition Index
BANC	Basic Antenatal Care
BMS	Breast Milk Substitutes
CARMMA	Campaign on Accelerated Reduction of Maternal and Child Mortality
CBO	Community Based Organisation
CCG	Community Care Givers
CDC	Centers for Disease Control
CHW	Community Health Worker
CSI	Company Support Initiatives
DAFF	Department of Agriculture Forestry and Fisheries
DG	Director General
DHIS	District Health Information System
DOH	Department of Health
DPME	Department of Performance Monitoring and Evaluation
DPSA	Department of Public Service and Administration
DRDLR	Department of Rural Development and Land Reform
DSD	Department of Social Development
EC	Eastern Cape
ECD	Early Childhood Development
EHP	Environmental Health Practitioner
ESG	Environmental, Social and Governance
FGD	Focus Group Discussions
FHI	Family Health International
GAIN	Global Alliance for Improved Nutrition
HIV	Human Immunodeficiency Virus.
HR	Human Resources
IEC	Information, Education, and Communication
IMCI	Integrated Management of Childhood Illnesses
INP	Integrated Nutrition Programme
INS	Integrated Nutrition Strategy
IYCF	Infant and Young Child Feeding
KFC	Kentucky Fried Chicken
KZN	KwaZulu-Natal
M&E	Monitoring & Evaluation
M2M	Mothers to Mothers

MBFI	Mother Baby Friendly Initiative
MNCWH	Maternal, Newborn, Child and Women's Health
NACSCAP	Nutrition Assessment Counselling and Support Capacity Project
NGO	Non-Government Organisation
ORS	Oral Rehydration Solution
OSS	Operation Sukuma Sakhe
PATH	Program for Appropriate Technology in Health
PHC	Primary Health Care
PMTCT	Prevention of Mother to Child Transmission
SABR	South African Breast milk Reserves
SANHANES	South African National Health and Nutrition Examination Survey
SAW	Social Auxiliary Workers
SOP	Standard Operation Procedure
TAC	Treatment Action Campaign
TB	Tuberculosis
UKZN	University of KwaZulu-Natal
UNICEF	United Nations International Children's Emergency Fund
U5	Under 5 (years of age)
USAID	United States Agency for International Development
WC	Western Cape
WHA	World Health Assembly
WHO	World Health Organisation

GLOSSARY

Ante-natal	Before birth; during or relating to pregnancy
Basic Antenatal Care (BANC)	The regular preventive care recommended for women during pregnancy that benefits both mother and child. Essential interventions include identifying and managing obstetric complications and infections, promoting healthy behaviours such as breastfeeding, giving medical information around biological changes, and giving nutritional counseling and vitamins to prevent maternal anaemia and malnutrition and to enhance a healthy pregnancy outcome. In South Africa, the recommended schedule for BANC is 4 visits during pregnancy starting in the first trimester. Routine BANC plays a part in reducing maternal death rates, miscarriages, birth defects, low birth weight, and other preventable health problems.
Beneficiaries	Beneficiaries in this evaluation included pregnant women and/or caretakers of children 0-5 years of age who were present at health facilities during fieldwork. Beneficiary focus groups were carried out as part of this evaluation.
Breast milk substitute	Any food being marketed or otherwise represented as a partial or total replacement for breast milk whether or not it is suitable for that purpose.
Breastfeeding Protection, Promotion and Support.	In South Africa, Breastfeeding Protection, Promotion and Support consists of 4 main activities: (i) enforcement of the International Code on Marketing of Breast milk substitutes (e.g. responsible advertising about breast-milk substitutes and effective legislation to define and monitor unacceptable marketing), (ii) behavioural change from mothers to exclusively breastfeed (no other liquids or solid foods) for the first six months of life and after introducing solids at 6 months of age, continued breastfeeding for up to 2 years, (iii) promotion of breastfeeding during delivery, and (iv) workplace opportunities to breastfeed. Combined, these actions have been shown to promote more optimal breastfeeding behaviours which in turn reduces diarrhoea, acute respiratory infections, and malnutrition in infancy.
Complementary Feeding	The feeding of solid foods that are readily consumed and digested by the young child and that provide additional nutrition to meet all the growing child's needs. The recommended age range for beginning complementary feeding is from 6 months of age.
ECD food support	Provision of food at Early Childhood Development (ECD) centres is one element contributing to South Africa's Food Security Strategies. DSD subsidises registered ECD centres based on the number of children enrolled. The DSD signs 1-year Service Level Agreements under which the ECD Centre receives ZAR15 per child per day and a portion of this is to be spent on food. The DoH provides guidance on meal plans for ECD centres, and these are meant to guide the centres and DSD in assuring nutritious meals for children.
Exclusive Breastfeeding	Defined as "an infant's consumption of human milk with no supplementation of any type (no water, no juice, no nonhuman milk, and no foods) except for vitamins, minerals, and medications."[1] National and international guidelines recommend that all infants be breastfed exclusively for the first six months of life. Breastfeeding may continue with the addition of appropriate foods for two years or more. Exclusive breastfeeding has dramatically reduced infant deaths by reducing diarrhoea and infectious diseases. It has also been shown to reduce HIV transmission from mother to child, compared to mixed infant feeding.

[1] WHO. Accessed in January 2014. http://www.who.int/elena/titles/exclusive_breastfeeding/en/.

Food Access	Food Access, or "Access to food" is fundamental to South Africa's social safety net, as it provides supplemental food through various means including soup kitchens or food parcels for at-risk groups. Food Access is a key element that contributes to South Africa's Food Security Strategies.
Food Fortification	The process of adding vitamins and minerals to food. The main reasons for adding nutrients to food is to restore losses due to processing, storage and handling of foods; to improve overall nutritional quality of the food supply; and as a public health measure to correct recognised dietary deficiency(ies). Fortifying everyday staples means people become healthier, live longer, and lead more productive lives. Infant mortality is less likely to occur and children show higher levels of physical and mental development, resulting in improved performance in school. In South Africa, the following vitamins and minerals are added to maize and wheat flour: Vitamin A, Vitamin B1, Vitamin B2, Vitamin B6, Niacin, Folic Acid, iron and zinc, and iodine is added to salt.
Food prices/zero-VAT rating	Since 1984, South Africa has removed VAT (i.e. zero-VAT rated) from certain basic foodstuffs as a means to make basic foods more accessible to the poor. Currently the following foods are zero-rated: brown bread, maize meal, samp, mealie rice, dried mealies, dried beans, lentils, tinned pilchards/sardines, milk powder, dairy powder blend, rice, vegetables, fruit, vegetable oil, milk, cultured milk, brown wheaten meal, eggs, edible legumes and pulses of leguminous plants. This is a mechanism to enhance access to food and contain food prices
Food Security (output 2 of Outcome 7)	The South African Government's Output 2 of Outcome 7 is "improved access to affordable and diverse food". Food Security in South Africa consists of four main strategies implemented through the combined efforts of the Department of Agriculture, Forestry and Fisheries (DAFF), DoH, and DSD: (i) ensuring access to food (through various DSD interventions), (ii) improved nutrition security (through various DoH health and nutrition interventions), (iii) improved food production capacity of households and poor resourced farmers (DAFF), and (iv) development of market channels for food (DAFF).
Growth Monitoring and Promotion (GMP)	Growth Monitoring (GM) is the process of periodic, frequent measurements of the growth of a child in comparison to a standard. GMP is a prevention activity comprising of GM linked with promotion (usually counseling) to increase awareness about child growth; improve caring practices; and serve as the core activity in an integrated child health and nutrition programme. As an intervention, GMP is designed to affect family-level decisions and individual child nutritional outcomes.
Household Food Production and Preservation	Household food production / food preservation is one component of South Africa's Food Security Strategy. DAFF has promoted and supported home gardening as well as school, community, and clinic gardens to complement and supplement the food parcels programme carried out by the Department of Social Development (DSD) as part of its Food Security strategy. DSD now promotes home gardening as part of its Sustainable Livelihoods programme.
IMCI (Integrated Management of Childhood Illnesses)	IMCI is an integrated approach to child health that focuses on the well-being of the whole child and that aims to reduce death, illness and disability and to promote improved growth and development among children under five years of age. IMCI includes both preventive and curative elements that are implemented by families and communities as well as by health facilities. WHO notes that if implemented well, IMCI can reduce under-five mortality and improve nutritional status. In South Africa, IMCI is delivered through health facilities by IMCI-trained nurses as part of the primary health care package of services.

Improved Hygiene Practice	Improved water quality, improved disposal of human excreta, and interventions that promote hand washing have been shown to reduce diarrhoea. Repeated diarrhoea incidence in the first two years of life significantly increases the risks of being stunted by age two years, and some water, sanitation and hygiene interventions may improve height growth in children under five years of age. In South Africa, most hygiene education, improved water quality, and sanitation is delivered through local government/municipalities, although the DoH is also responsible for hygiene education as part of the primary health care package of services.
Indicator	A monitoring and evaluation term for an objectively verifiable measurement which reflects the activity; assumption, or effect being measured.
International Code of Marketing of Breast Milk Substitutes	An international health policy framework for breastfeeding promotion adopted by the World Health Assembly (WHA) of the World Health Organisation (WHO) in 1981. The Code was developed as a global public health strategy and recommends restrictions on the marketing of breast milk substitutes, such as infant formula, to ensure that mothers are not discouraged from breastfeeding and that substitutes are used safely if needed. The Code also covers ethical considerations and regulations for the marketing of feeding bottles and teats.
Intra-partum	During childbirth or during delivery.
Lactation	The secretion or production of milk by mammary glands in female mammals after giving birth
Mainstreaming Interventions	Mainstreaming an intervention involves planned action, including legislation, policies or programmes, in any area and at all levels[2]. It is the process of bringing together common functions within and between organizations to solve common problems, developing a commitment to a shared vision and goals, and using common technologies and resources to achieve these goals[3]. It is a strategy for making concerns and experiences an integral part of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres[2].
Malnutrition	A broad term describing the condition that develops when the body does not get the correct amount of kilojoules, vitamins, minerals, and other nutrients it needs to maintain healthy tissues and organ function. Commonly used as a broad term to refer to under nutrition and over nutrition.
Management of Moderate Malnutrition	See Targeted Supplementary Feeding.
Management of Severe Malnutrition	A medical and a social disorder, whereby malnutrition is the end result of chronic deprivation by carers who because of poor understanding, poverty, or family problems are unable to provide the child with the nutrition and care that is needed. Successful management of severely malnutrition requires both medical and social interventions. If the illness is viewed as only a medical disorder, the child is likely to relapse when returning home. In South Africa, management of severe malnutrition is mainly delivered through district and other tertiary hospitals, although health workers at all levels are responsible for identifying cases.
Micronutrient deficiency	Occurs when the body does not have sufficient amounts of essential vitamins or minerals required by the body. Deficiency occurs when there is insufficient dietary intake and/or insufficient absorption and/or suboptimal utilisation of the vitamin or mineral.

[2] Anon. International Labour Organization (ILO). 2013. http://www.ilo.org/public/english/bureau/gender/newsite2002/about/defin.htm

[3] http://www.afro.who.int/en/clusters-a-programmes/iss/immunization-systems-support/integrated-child-survival-interventions.html

Micronutrient supplementation	Enhancing or boosting the nutritional content of one's diet with vitamins or minerals. Young children are highly vulnerable to micronutrient deficiencies as they have low body stores of these nutrients, and can have low intake due to improper feeding practices, and losses due to infections. Micronutrient supplementation in pregnancy and during early childhood is associated with proper growth and decreased complications of infections. In South Africa, the most common micronutrients given to pregnant women are Iron and Folic Acid, along with general multi-vitamins. Children in South Africa are supposed to be given routine Vitamin A supplementation.
Mixed Feeding	Feeding breast milk along with infant formula, baby food and even water.
Moderate malnutrition	A growth measure between minus two (-2) and minus three (-3) standard deviations from the median of the standard reference population.
Morbidity	Refers to the state of being diseased or unhealthy within a population.
Mortality	Refers to the number of deaths in a population.
Nutrition	The process of providing or obtaining the food necessary for health and growth. The intake of food, considered in relation to the body's dietary needs. Good nutrition – an adequate, well balanced diet combined with regular physical activity – is a cornerstone of good health. Poor nutrition can lead to reduced immunity, increased susceptibility to disease, impaired physical and mental development, and reduced productivity.
Nutrition Education and Counseling	Enhancing the quality of the diet, by educating about foods and what quantities are needed in order to achieve optimal dietary intake. This can also include counseling on micronutrient supplements. There is some evidence that nutrition training of health workers improves energy intake, feeding frequency, and dietary diversity of children between six months and two years of age. In South Africa, health facilities have the prime responsibility for delivery nutrition education and counseling, but with PHC re-engineering it is expected that community based nutrition education and counseling will be strengthened.
Obesogenic	Causing and leading to obesity.
ORS (Oral Rehydration Salts)	A dry mixture of salt and sugar/glucose (sodium chloride) which is mixed with water to prepare a solution of used for treating dehydration due to diarrhoea or other causes. UNICEF In South Africa, both ORS and Zinc are given to children during diarrhoeal episodes.
Over nutrition	A form of malnutrition which occurs if a person consumes too many kilojoules.
Overweight	A form of over nutrition. Scientifically defined as weight for height above two standard deviations from the median weight for height of the standard reference population.
PHC Re-engineering	A restructuring of the South African health system to better implement Primary Health Care to take comprehensive services to communities with an emphasis on disease prevention, health promotion and community participation. PHC Re-engineering is focused on strengthening the district health system (DHS) through three cohesive and co-coordinated streams: (a) the deployment of ward based PHC outreach teams; (b) strengthening of school health services; and (c) deployment of district clinical specialist teams aimed at improving maternal and child health in particular.
Post-partum	After childbirth.
Prioritised Nutrition Interventions	Prioritised nutrition interventions are services which have policies, guidelines, protocols, budgetary allocation and are actually delivered on the ground to all or most eligible patients/clients as evidenced by coverage rates or other measures.
Regulations	Refers to rules issued by Parliament governing the implementation of relevant South African legislation. Examples of regulations issued under the Foodstuffs, Cosmetics, and Disinfectants Act (Act 54 of 1972) in South Africa, include R. 991 relating to foodstuffs for infants and young children, and R146 relating to the labelling, marketing, educational information, and responsibilities of health authorities related to general foodstuffs.

Sanitation	Refers to facilities that ensure hygienic separation of human excreta from human contact, including flush or pour flush toilet/latrine to piped sewer system, septic tank or pit latrine; ventilated improved pit (VIP) latrine; pit latrine with slab; and composting toilet.
Severe acute malnutrition	Defined as below minus three (-3) standard deviations from the median of the standard reference population, mid-upper arm circumference (MUAC) less than 115 mm, visible severe thinness, or the presence of nutritional oedema[4].
Stunting	Too short for one's age. Scientifically defined as height for age below minus two standard deviations from the median height for age of the standard reference population.
Supplementary feeding	Additional foods provided to vulnerable groups, including moderately malnourished children.
Targeted Supplementary Feeding (TSF)	An intervention to treat moderate malnutrition in South Africa. TSF is mainly delivered through health facilities and is intended as a short-term intervention with specific entry and exit criteria. The intervention includes the provision of food supplements according to age-specific needs and disease-specific conditions.
Under nutrition	A form of malnutrition that occurs if the diet does not provide adequate kilojoules and protein for growth and maintenance, or if the person is unable to fully utilize the food eaten due to illness; the outcome of insufficient food intake, inadequate care and infectious diseases. It includes being too thin for one's age (underweight), too short for one's age (stunting), dangerously thin for one's height (wasting) and deficient in vitamins and minerals (micronutrient deficiencies).
Underweight	Under nutrition that is scientifically defined as weight for age below minus two standard deviations from the median weight for age of the standard reference population.
Wasting	Underweight for one's height. Scientifically defined as weight for height below minus two standard deviations from the median weight for height of the standard reference population. A child can be moderately wasted (between minus two and minus three standard deviations from the median weight for height) or severely wasted (below minus three standard deviations from the median weight for height).
Zinc	An essential mineral with a wide variety of functions within the human body. Zinc is needed to repair wounds, maintain fertility in adults and growth in children, synthesize protein, help cells reproduce, preserve vision, boost immunity, and protect against free radicals, among other functions.

[4] World Health Organization. Supplement – SCN Nutrition Policy Paper 21. Food and Nutrition Bulletin, 27 (3). 2006. http://www.who.int/nutrition/topics/malnutrition/en/

1 INTRODUCTION

Malnutrition in infants and young children typically develops during the period between 6 and 18 months of age and is often associated with intake of low nutrient or energy dense diets, consisting predominantly of starch-rich staples, and frequent infections. Linear growth (i.e. height) and brain development are especially rapid during the pregnancy first 2 years of life and young children are particularly susceptible to growth failure and developmental delays if they are not breastfed and are fed complementary foods with low nutrient/energy density and poor bioavailability of vitamins and minerals. Furthermore, conditions of poor hygiene and sanitation can lead to frequent infections, which further impairs children's nutritional status. Infant and child malnutrition contributes to increased morbidity and mortality, impaired intellectual development, suboptimal adult work capacity and even increased risk of disease in adulthood.

1.1. Background to the Nutrition Evaluation

Although nutrition programmes have been in place in South Africa since the 1960's, they were not very effective in reducing malnutrition because they focused primarily on providing food to the needy and not the underlying causes of malnutrition (i.e. illness, poor household access to food, inadequate maternal and child care, poor access to health services, and an unhealthy environment with limited access to clean water and sanitation).

In the mid-1990's the Government introduced the Integrated Nutrition Programme (INP) which aimed to improve nutrition through emphasizing collaboration between Government departments (inter-sectoral collaboration of line departments) to promote joint action for addressing nutrition problems. Inter-sectoral collaboration was envisioned mainly between the Departments of Health (DOH), Social Development (DSD), Agriculture, Forestry, and Fisheries (DAFF), and Rural Development and Land Reform (DRDLR)as these departments each deliver food and nutrition interventions specific to their sector. The expected outcome of this approach was to improve nutritional status of South Africa's vulnerable populations, namely pregnant women and children under the age of five.

To date, however, malnutrition persists as an underlying cause and contributor to child mortality and morbidity in South Africa. Indeed, South Africa is one of only 15 countries where little to no progress has yet been made in reducing under-five mortality by two-thirds[5] (Millennium Development Goal 4), and although this situation is partly due to South Africa's heavy burden of HIV, it is also due to a variety of underlying factors, including poor infant and child nutrition as evidenced by the recent 2012 South African National Health and Examination Survey (SANHANES)[6] which found that 21.6% of children age 0-5 are stunted, and 5.5% are underweight.

> In South Africa, a large percentage of young children age 0-5 show signs of malnutrition: 21.6 % are stunted, and 5.5 % are underweight for their age (2012).

[5] UNICEF. *Levels & Trends in Child Mortality. Report 2011*. Estimates Developed by the UN Inter-agency Group for Child Mortality Estimation. http://www.unicef.org/media/files/Child_Mortality_Report_2011_Final.pdf.

[6] HSRC. South African National Health and Nutrition Examination Survey. 2012. http://www.hsrc.ac.za/en/research-outputs/view/6493 and http://www.hsrc.ac.za/en/research-areas/Research_Areas_PHHSI/sanhanes-health-and-nutrition

Given this, the Department of Performance Monitoring and Evaluation (DPME) in the Presidency commissioned the "Diagnostic/Implementation Evaluation of Nutrition Interventions for Children from Conception to age 5" to examine critical systemic and implementation issues that inhibit or enable access to nutrition interventions for pregnant women and children under the age of 5.

The findings from this evaluation are meant to assist the Government in improving implementation of existing nutrition interventions by identifying inhibiting or enabling factors that affect access to nutrition services (particularly among children) and to support the scale-up of interventions as required.

1.2. Objectives/Terms of Reference (TOR) for this Evaluation

This qualitative evaluation aims to identify the factors contributing to effective or non-effective implementation of 18 nutrition interventions being delivered by Government, with an emphasis on the first 4 interventions as listed in Table 1 below. The full terms of reference for this evaluation can be found in Appendix A.

Table 1: 18 Nutrition Interventions Explored in this Evaluation

Nutrition Intervention *(NB: the first four interventions (bolded) are the main focus of the evaluation)*	**Responsible Department**
1. Breastfeeding support*	Health
2. Management of moderate malnutrition including targeted supplementary feeding*	Health
3. Household food production and preservation (home gardening)	DAFF
4. Food access (e.g. food parcels, soup kitchens)	DSD
5. Early Childhood Development (ECD) (food in ECD centres)	DSD
6. Complementary feeding*	Health
7. Food fortification (Vitamin A, Iron and Iodine)*	Health
8. Micronutrient including Vitamin A supplementation*	Health
9. Oral Rehydration Salts (ORS) and Zinc*	Health
10. Management of severe malnutrition*	Health
11. Deworming	Health
12. Growth monitoring and promotion including the use of Mid-Upper Arm Circumference (MUAC) measurements	Health
13. Nutrition education and counselling (part of all of these)	Health
14. Improving hygiene practice (including in relation to water and sanitation)	Health
15. BANC (Basic ante-natal care) – education and supplements, timing	Health
16. IMCI (Integrated management of childhood illnesses)	Health
17. Access to (nutritious) food, food prices	DAFF
18. Food security (output 2 of outcome 7 in the National Priority Outcomes)	DRDLR/DAFF

* High impact interventions

1.3. Approach / Methodology

Khulisa's approach to the evaluation examined the following six moderating factors that have been identified as influencing the policy implementation:

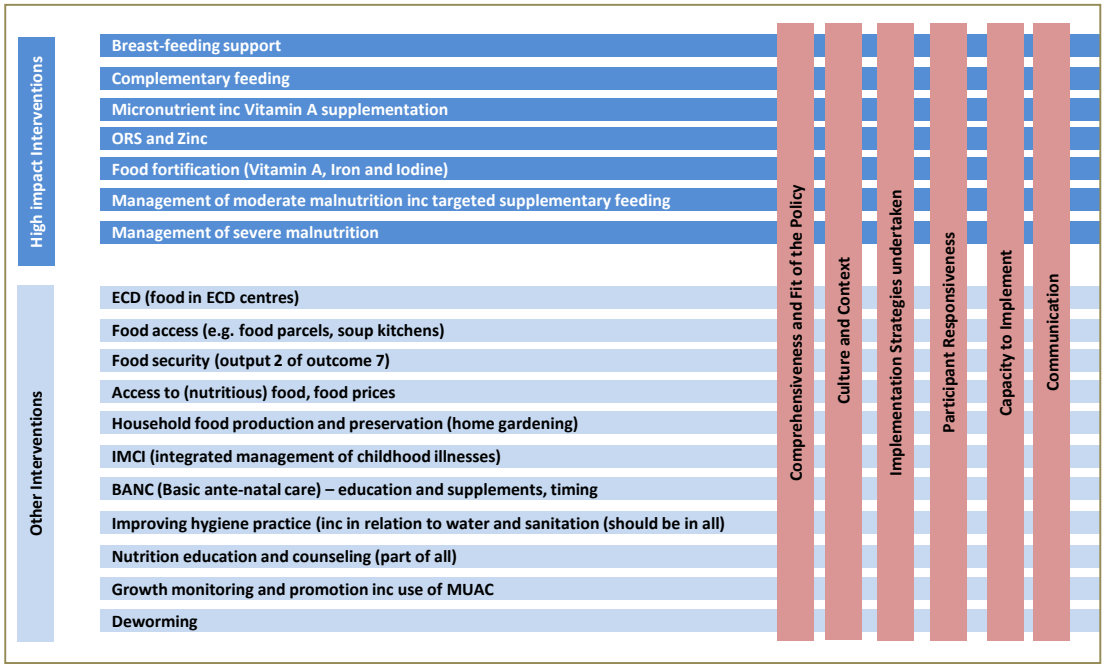
1) the policy's content and fit for the local environment,
2) the institutional context and culture, including readiness to change and the extent of commitment at all levels through which the policy passes,
3) the various implementation strategies (i.e. models) devised for carrying out the policy,
4) the institutional capacity to implement the policy,

5) participant responsiveness, and

6) communication to the general public and within government itself.

These moderating factors comprised the "lens" through which Khulisa examined the implementation of the INP and its 18 nutrition interventions, and for answering the 17 evaluation questions put forth in the TOR. Figure 1 below depicts this conceptual approach in graphical form.

Figure 1: Conceptual Framework for the Evaluation



1.1.1 Literature Review

The starting point for this evaluation was a literature review that provided the context for this implementation evaluation. The literature review examined the following relevant topics:

1. Current health and nutrition status of children under 5 and pregnant women in South Africa;
2. South Africa's policy framework on maternal and child nutrition;
3. A review of nutrition policies and interventions from 5 countries that have successfully improved their nutrition performance (Brazil, Columbia, Malawi, Mozambique, and Malaysia). These countries were selected by the Evaluation Steering Committee as comparisons to South Africa based on one of the following two reasons:
    - the country has similar economic or infrastructure characteristics to South Africa but much better nutrition performance at a national level (i.e. Brazil, Columbia, and Malaysia), or
    - the country is geographically proximate to South Africa and thus has similar environmental and cultural characteristics, but again better nutrition performance (i.e. Malawi and Mozambique);
4. An analysis of implementation issues present in the literature.

1.1.2 FIELDWORK

Data collection then took place at national level and in four provinces (Western Cape, Eastern Cape, Free State, and KwaZulu-Natal). At national level, Key Informant Interviews were held with relevant national government managers as well as with representatives from international NGOs, donor organisations, and private food companies. In each province, key Informant Interviews were held with relevant provincial managers in the Departments of Health, Agriculture, and Social Development, as well as with representatives from 3 NGOs and 1 ECD centre in each province.

Two districts were purposefully selected in each province and key informant interviews were held with relevant district managers in the Departments of Health, Agriculture, and Social Development. Within each district, 4 health facilities were randomly selected for fieldwork and staff were interviewed. In addition, in each health facility, we also conducted focus group discussions (FGDs) with beneficiaries, rapid assessments of nurses' nutrition knowledge, and rapid assessments of the health facilities' equipment, supplies, and guidelines.

Figure 2: Main Data Collection Components of the Evaluation

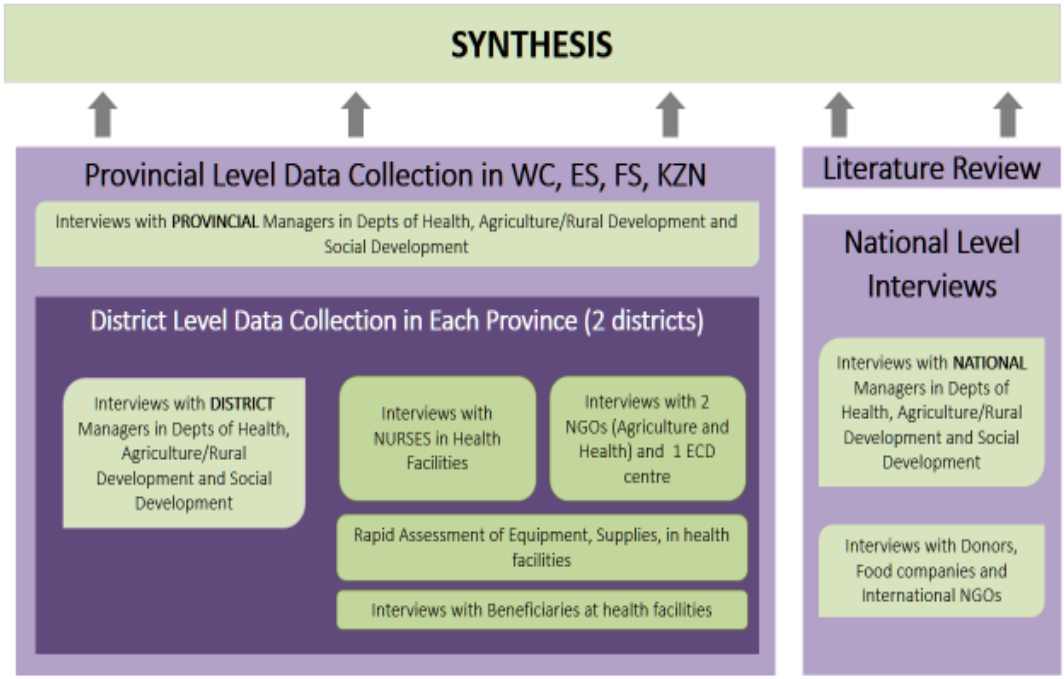


Table 2 presents a summary of planned and actual data collection, and Figure 3 presents a map of data collection sites.

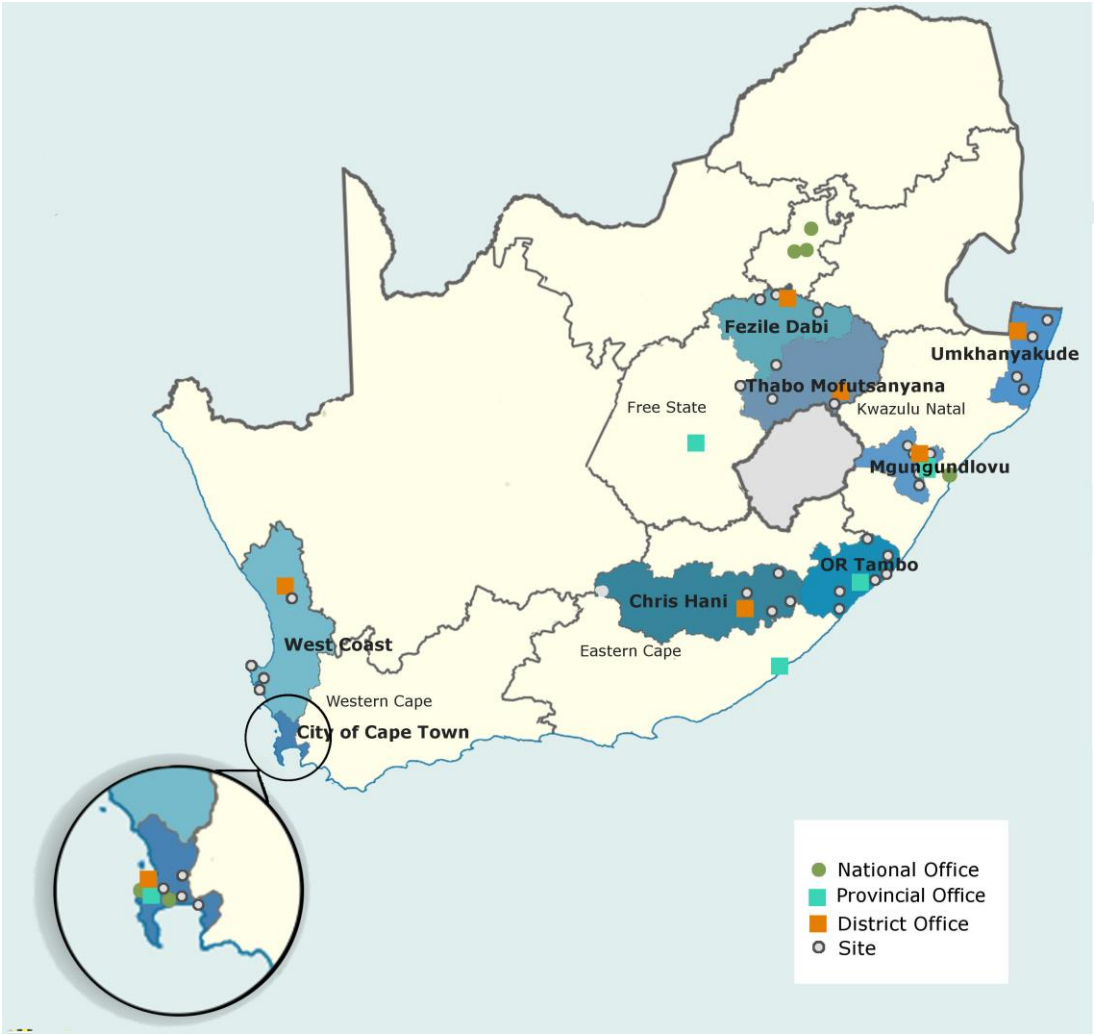
Table 2: Fieldwork Conducted

Data Collection Method and Stakeholders Group	No. of Interviews / FGDs		
	Planned	Actual	Response Rate %
Individual or Group Interviews			
National Government Managers	4	5	125%
Representatives of International NGOs	4	4	100%
Donors	3	4	133%
Private Food Companies	4	4	100%
Provincial Government Managers	12	15	125%
District Government Managers	24	21	88%
Health Workers in Health Facilities	32	31	97%

Data Collection Method and Stakeholders Group	No. of Interviews / FGDs		
	Planned	Actual	Response Rate %
Local NGO	8	8	100%
ECD Centre	4	5	125%
Focus Group Discussions			
Beneficiaries FGDs at health services and community projects	48	40	83%

Other Assessments	Planned	Actual	Response Rate %
Health Facilities Rapid Assessments	40	36	90%
Rapid Assessment of Nurses' Nutrition Knowledge	76	132	174%

Figure 3: Fieldwork Locations



Case Study reports were prepared for each of the four provinces where fieldwork took place, as well as for each of the four priority interventions. In all, 11 reports were prepared for this evaluation as listed below:

1. Literature Review
2. Breastfeeding Case Study
3. Targeted Supplementary Feeding Case Study

4. Home Gardens Case Study
5. Food Access Case Study
6. KwaZulu-Natal Provincial Case Study
7. Eastern Cape Provincial Case Study
8. Free State Provincial Case Study
9. Western Cape Provincial Case Study
10. Final Evaluation Report
11. Summary of Final Evaluation Report

1.4. Limitations of the Evaluation

By their nature, qualitative evaluations of policies and programme implementation allow examination of the broader context, rather than specific measurements of compliance to policy elements or programmatic guidelines. This evaluation's extremely broad scope (18 interventions, 17 research questions, and investigation of 6 moderating factors) resulted in very lengthy interviews with respondents who often had time constraints, particularly in the WC. Consequently, many respondents gave only cursory information around the issues that we sought to explore more deeply.

Because the INP's nutrition interventions for the health sector far outweigh the number of nutrition interventions in the social development and agriculture sectors, the evaluation's sampling framework is biased toward respondents from health. In addition, at provincial, district, and local levels, most respondents were able to speak knowledgeably about nutrition interventions implemented by their specific government department, but few were able to comment on the adequacy of implementation for interventions outside their sector. As a result, data collected from social development and agriculture is sparse compared to that collected from health, making generalisations on implementation in agriculture and social development more difficult.

Data collection in the WC was significantly delayed due to the need to secure ethics clearance before the commencement of field work. This delay led to time constraints on the part of the researcher which in turn resulted in less complete data for the WC compared to that for the other 3 provinces.

A detailed description of the methodology used in the evaluation is found in Appendix B to this report.

2 BACKGROUND

2.1 Nutritional Status of Young Children in South Africa

Presently, more than 20% of children under 5 years of age are stunted in South Africa, and 5% are underweight, although both have declined since 2003. Provincial differences are evident (Figure 4 and Figure 5) and in some provinces (KZN, NW, MP) the prevalence of stunting has actually increased since 2003.

Figure 4: Stunting Prevalence in children U5 - 2003 and 2012

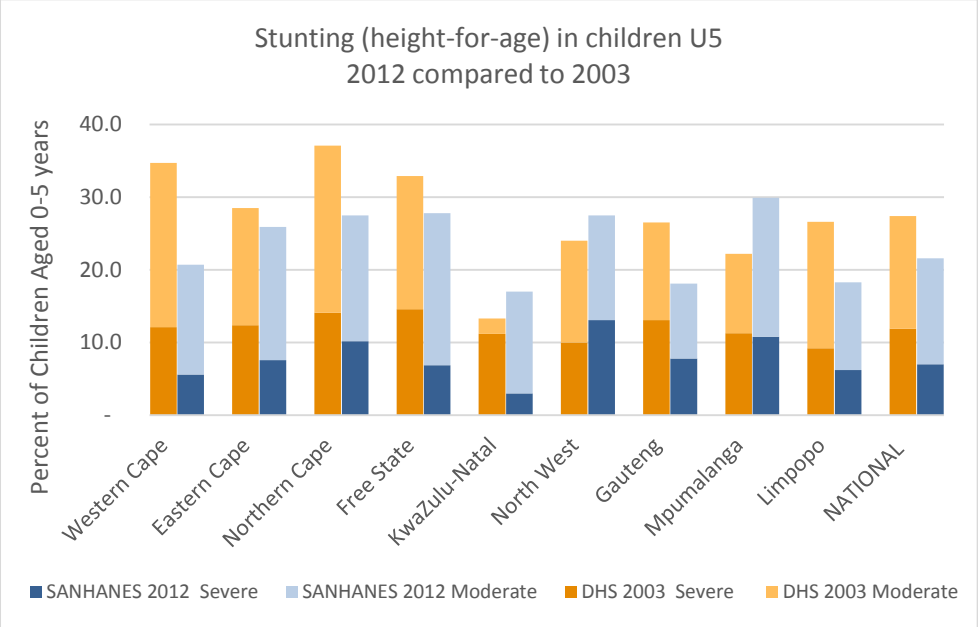
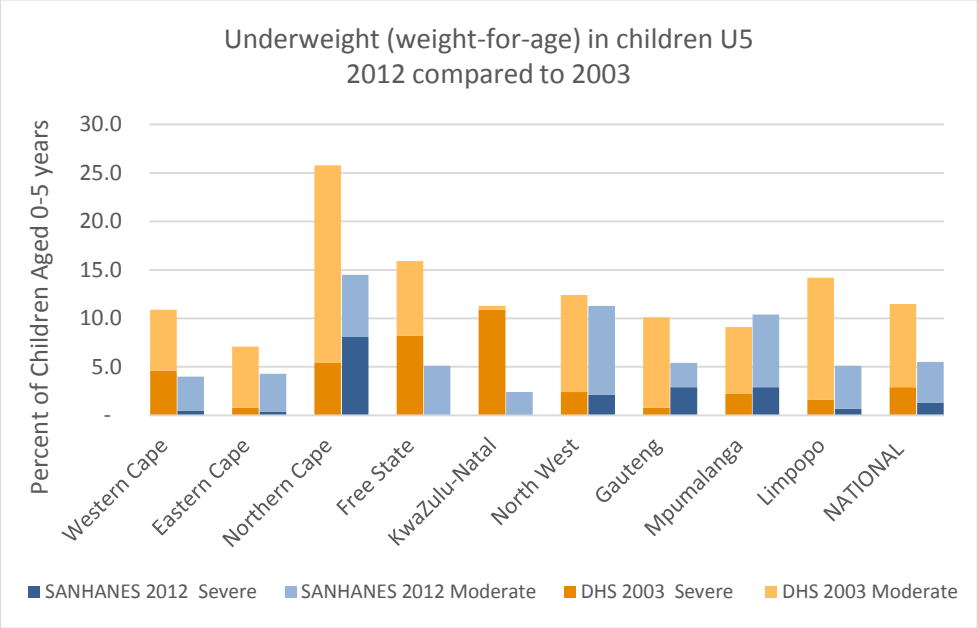
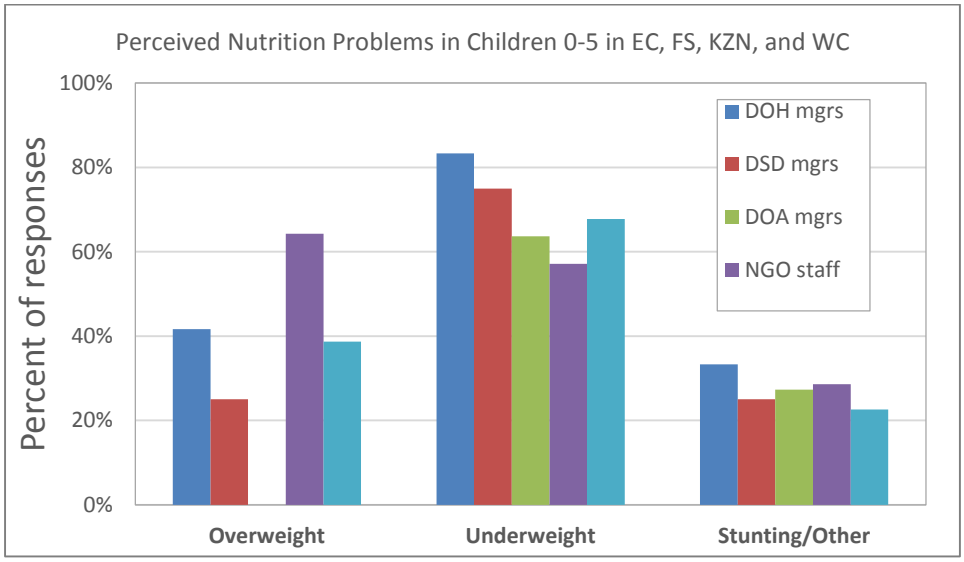


Figure 5: Underweight Prevalence in children U5 - 2003 and 2012



In contrast to the situation described above, most of the evaluation respondents perceive underweight to be the most common nutrition problem (Figure 6), with only a minority recognising stunting as a widespread nutrition problem, and few recognise overweight as an issue. The lack of awareness of stunting as a broad nutrition issue affects government programming and implementation of nutrition interventions.

Figure 6: Respondents' Perceived Nutrition Problems in Children U5 (N=99)



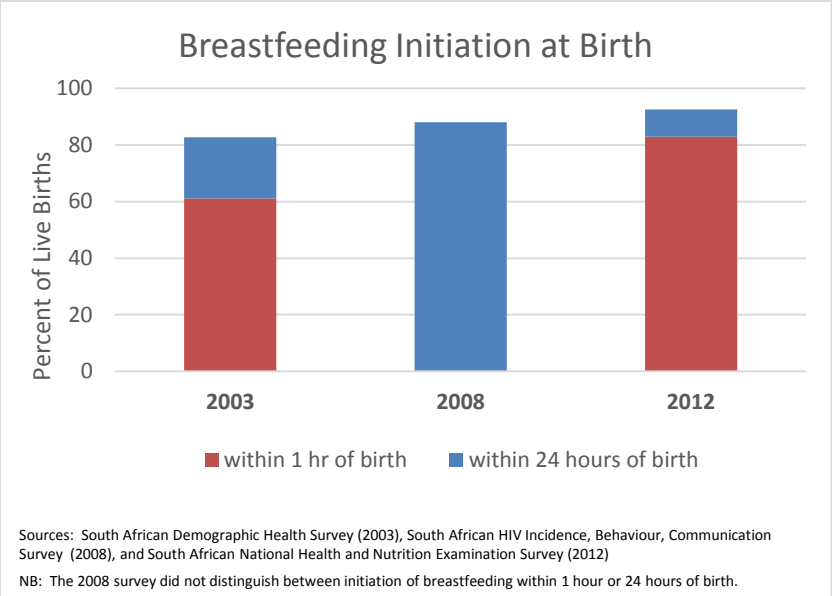
2.2 Breastfeeding Promotion and Practice in South Africa

Breastfeeding is one of the most powerful interventions for child health and well-being:

- Breastfeeding is one of the top 3 interventions for preventing mortality in children under five[1];
- Initiation of breastfeeding within 24 hours of birth is associated with a 44—45% reduction in neonatal mortality[1]; and
- There is some evidence that breastfed babies have a reduced risk of becoming obese children compared with bottle-fed children[2].

The coverage of breastfeeding promotion and support services and related behaviour varies, but is generally not optimal. For example, the recently-published Tshwane Declaration[3], WHO, UNICEF, and the nutrition community at large recommend that infants be only breastfed (without any other foods or liquids) until 6 months of age. Fortunately, in South Africa most infants do breastfeed from birth and the rates of breastfeeding initiation have increased since 2003 (Figure 7).

Figure 7: Initiation of Breastfeeding at Birth [4, 5, 6]

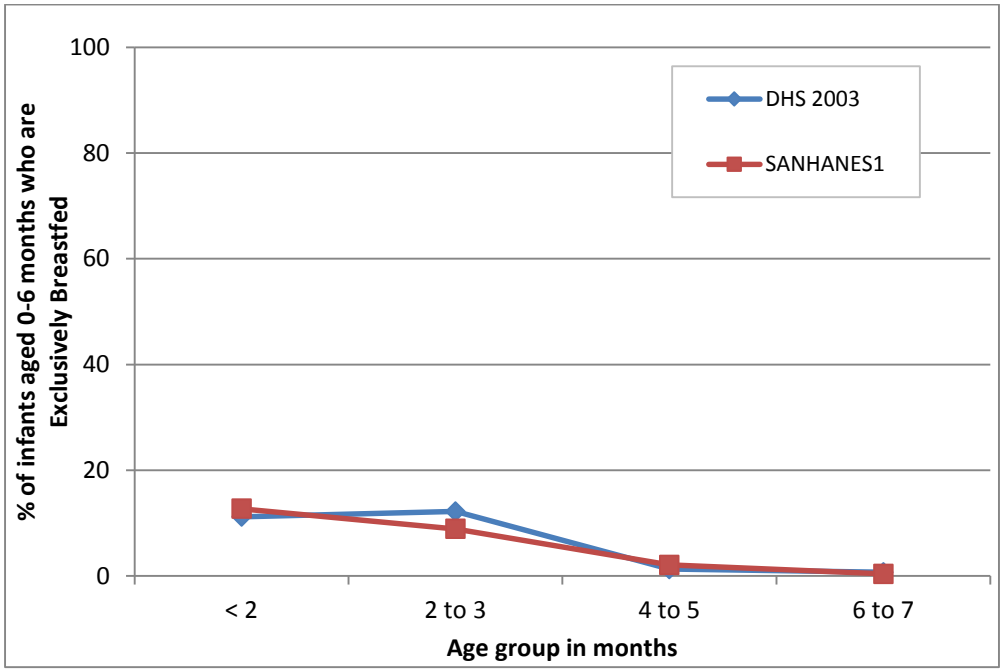


Sources: South African Demographic Health Survey (2003), South African HIV Incidence, Behaviour, Communication Survey (2008), and South African National Health and Nutrition Examination Survey (2012)

NB: The 2008 survey did not distinguish between initiation of breastfeeding within 1 hour or 24 hours of birth.

But within the first 2 months of the life, most infants have been given other liquids, milks, or solid foods and by 2 months of age only 12% of infants are exclusively breastfed (Figure 8), and exclusive breastfeeding practice drops consistently until at 4-6 months of age only 2% of infants are exclusively breastfed. These infant feeding practices are significantly poorer than that recommended by the recently-published Tshwane Declaration[7], WHO, UNICEF, and the nutrition community at large.

Figure 8: Rates of Exclusive Breastfeeding by Infant Age Group according to DHS 2003 and SANHANES1 2012



One explanation for the poor rates of exclusive breastfeeding in the first 6 months of life is that until recently South Africa's health system has not always effectively promoted or supported breastfeeding, especially for HIV positive mothers who were given infant formula as part of the country's PMTCT programme. In addition, many mothers are discharged within six hours after birth, giving insufficient time for young, inexperienced mothers to establish breastfeeding. Most affluent mothers in the Cape Metropole (80%) decide after delivery to formula feed their infants, indicating the possibility of missed opportunities at antenatal, labour and postnatal care stages for mothers to be advised on the advantages of breast milk as the "normal" feeding option[8]. Conflicting and competing information on how to best feed infants and young children also comes from family beliefs, community practices, and health workers, as well as advertising and commercial promotion by food manufacturers.

Bottle feeding presents many risks, as evidenced by a study in the Eastern Cape Province that found that 38 % of feeding bottle samples collected from PMTCT clinics and home visits were contaminated with faecal bacteria, indicating unsafe replacement feeding practices[9].

Although infant feeding counselling is recognised as the weakest link in the routine child health programme[10], there is indication of some improvement in the rate of exclusive breastfeeding as a result of recent policy changes that emphasise exclusive breastfeeding[11] for child health and survival, particularly for HIV-positive mothers. A recent study of breastfeeding practices of both HIV-positive and HIV-negative mothers found that HIV-positive mothers undertake safer infant feeding practices (i.e. less use of commercial infant formula and more exclusive breastfeeding) compared with HIV-negative women. The better practices among HIV-positive women are attributed to counselling provided by trained PMTCT counsellors who most likely have clarified ambiguous messages[12]. While this is encouraging for HIV exposed infants and young children, because mixed infant feeding has a large effect on postnatal transmission of HIV, it points to the need for improved infant feeding counselling for all mothers regardless of their HIV status.

3 BREASTFEEDING INTERVENTION - THEORY OF CHANGE

Breastfeeding promotion needs action on various fronts[13]: (i) enforcement of the International Code on Marketing of Breast milk substitutes (e.g. responsible advertising about breast-milk substitutes and effective legislation to define and monitor unacceptable marketing), (ii) behavioural change from mothers to exclusively breastfeed (no other liquids or solid foods) for the first six months of life and after the introducing solid foods at 6 months of age, continued breastfeeding for up to 2 years, (iii) promotion of breastfeeding during delivery, and (iv) workplace opportunities to breastfeed. Combined, these actions have been shown to promote more optimal breastfeeding behaviours which in turn reduces diarrhoea, acute respiratory infections, and malnutrition in infancy. A proposed logic model for an ideal breastfeeding intervention is presented in Figure 9 and further discussed below.

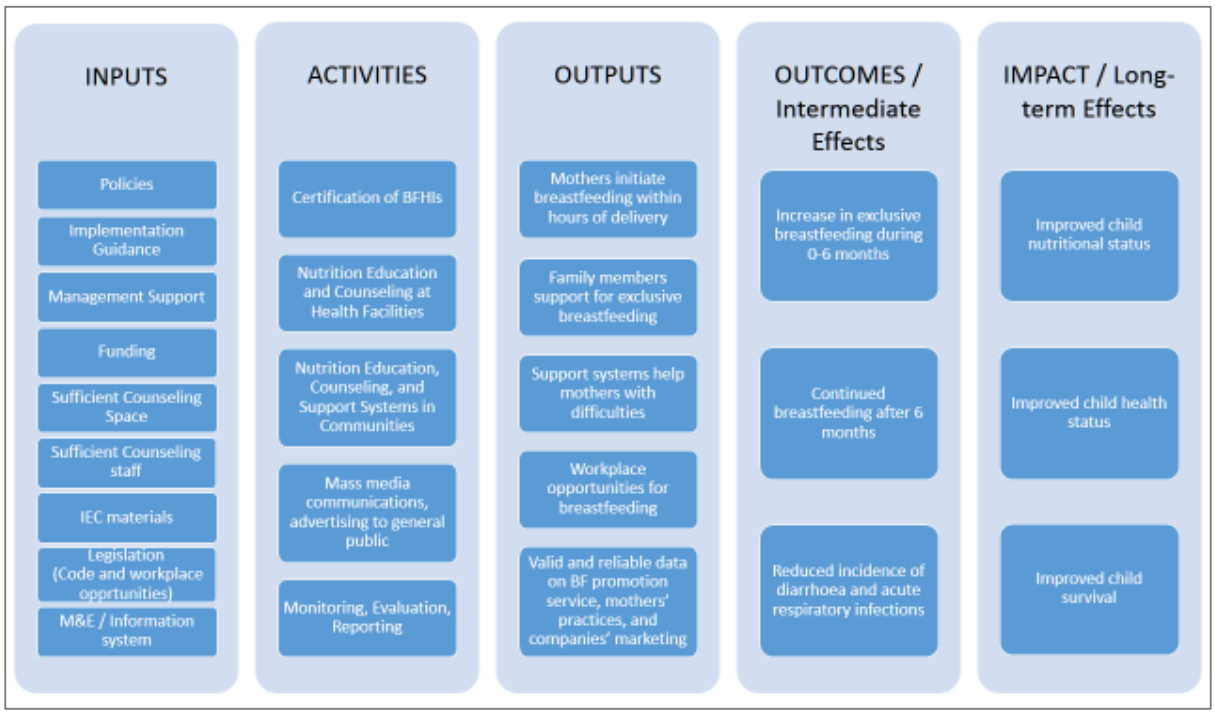
3.1 What is Expected to be Delivered?

3.1.1 Enforcement of the International Code

Governments need to enshrine the International Code of Marketing of Breast-milk Substitutes[14] and subsequent resolutions into national law, and put independent, transparent, and effective monitoring mechanisms in place[13] to ensure responsible promotion and advertising of breast-milk substitutes. In addition, governments can strengthen whistleblowing procedures within companies,

and implement prevention of code violations into the job descriptions of companies' senior representatives in each country[13]. In 2012, South Africa signed Regulations relating to Foodstuffs for Infants and Young Children (R.991) that give effect to the principles and aims of the WHO International Code of Marketing of Breast milk Substitutes[15] dealing with labelling, marketing, educational information, and responsibilities of health authorities. These regulations have legal force in South Africa and the industry must comply with the provisions thereof.

Figure 9: Logic Model for Breastfeeding Promotion



3.1.2 Behavioural Change

Behavioural change in mothers depends on continuous education, counselling, and support. Promoting breastfeeding through counselling or educational interventions in health facility and community settings show promising benefits[1]. Individual counselling combined with group counselling appears to be more effective than individual or group counselling alone[1].

The South Africa IYCF policy emphasises the following key educational and counselling activities for behaviour change:

- Educating mothers during pregnancy, delivery, and follow-up care on safe infant and young child feeding practices;
- Promoting early initiation of exclusive breastfeeding (within 1 hour after birth), including ensuring that breastfeeding is made as safe as possible for HIV-exposed infants
- Promoting, protecting, and supporting exclusive breastfeeding for 6 months after birth;
- Promoting, protecting, and supporting continued breastfeeding from 6 months up to two years of age or beyond;
- Promoting timely, adequate, safe and appropriate complementary feeding with continued breastfeeding;

- Educating communities on the influence of early feeding practices on infant and child health and childhood obesity;
- Ensuring PMTCT programme recommendations for HIV-positive women do not undermine optimal infant feeding practices in the general population;
- Ensuring that drugs are carefully selected and prescribed in lactating mothers;
- Informing mothers of the effect of medicinal drugs in breast milk; and
- Implementing broad-based communication (mass media, social marketing, etc.) that promotes breastfeeding to households and communities.

In South Africa, provincial/district DOH offices, health facilities, and community health entities are expected to build capacity of staff at all levels on the above elements, and ensure compliance with the relevant infant feeding policies as well as the provisions of the "International Code of Marketing Breast-milk Substitutes". Health workers' attitudes to, and knowledge of, breastfeeding is critical in ensuring that mothers receive accurate and consistent advice about breastfeeding. Health workers need counselling skills, communication skills, and access to accurate information to ensure that they provide clear information about breastfeeding to mothers. To deliver this information, there is need for sufficient numbers of staff and sufficient training to deliver the information.

In addition to education and counselling, milk banking is also a strategy for promoting behaviour change, by making available human breast milk to premature infants, and other babies who are unable to breastfeed.

3.1.3 MBFI (Mother Baby Friendly Initiative) ACCREDITATION of Health Facilities

The Mother Baby Friendly Initiative (MBFI) aims to transform maternity health services by removing health care practices that hinder breastfeeding immediately after birth, and to enhance breastfeeding practices beyond the hospital setting. The ultimate goal of the MBFI is to reduce maternal and infant morbidity and mortality and improve the health status of mothers and newborns.

At health facility level, the Baby Friendly Hospital Initiative (MBFI) is a key strategy to protect, promote and support breastfeeding. Hospitals are accredited as Baby Friendly if they demonstrate at least 80% compliance with each of the "Ten Steps to Successful Breastfeeding", as well as abiding by the "International Code of Marketing Breast-milk Substitutes".

3.1.4 Enhanced Workplace Opportunities for Breastfeeding

Promoting workplace opportunities to breastfeed requires governments and civil society to raise the profile of mothers who breastfeed in the workplace and introduce policies and legislation that benefit the wellbeing of the mother and her child. Some of these interventions include legislation and policy around extended maternity leave, flexible working hours, provision of on-site breastfeeding facilities, and infant-focused child care that supports and promotes breastfeeding[16].

3.2 How is Breastfeeding Promotion expected to be delivered?

The role of health personnel (nurses and nursing assistants) in promoting and supporting breastfeeding is clearly defined at health facility level, although PHC re-engineering also envisions breastfeeding support being delivered by PHC outreach teams and community health workers (CHWs) at community and household level. The various South Africa policies are not explicit about

the role of NGOs or CBOs in implementing breastfeeding promotion, although support groups exist to support mothers in breastfeeding and child feeding.

As opposed to a stand-alone intervention, health care providers are expected to integrate breastfeeding promotion into ante-natal, intra-partum, post-partum, and well-baby health services.

The MBFI strategy involves the accreditation of healthcare facilities, which also include capacity building of health care personnel and decision makers (directors, administrators, key managers, etc.) and policy makers to solicit their support for the scaling up of the strategy. Initial and periodic assessments by trained assessors are used to determine accreditation status based on the facilities' compliance with expected standards.

In enforcing the newly revised Regulations in support of the International Code, the government is expected to develop productive working relationships with manufacturers of infant formula to build trust for ensuring compliance with the provisions of the International code, as well as other WHA resolutions.

Finally, the Government is expected to establish effective monitoring systems at all levels (community, district, provincial and national) to ensure successful implementation of each intervention component.

3.3 The Intended Recipients

The breastfeeding intervention is ultimately aimed at all pregnant women and lactating mothers (irrespective of HIV-status), children under 2 years of age and beyond, and their families – particularly the behaviour change component of the intervention. In expanding workplace opportunities for breastfeeding, the intended recipients are working lactating mothers and their employers. In accrediting health facilities for MBFI status, the intended recipients are health care personnel and health managers. For enforcing the Regulations, the intended recipients are manufacturers of breast-milk substitutes as well as health care personnel who are expected to comply with the Regulation's provisions.

3.4 The Intended Changes in Beneficiaries' Behaviour

The following are the intended behaviour change outcomes of the intervention:

- Increased numbers of women, including HIV-positive women, exclusively breastfeeding for 6 months;
- Elimination of mixed feeding for all children under 6 months of age;
- HIV-positive women who have made an informed decision not to breastfeed do so under acceptable, feasible, affordable, sustainable and safe (AFASS) circumstances, and exclusively formula feed for at least 6 months;
- Breastfeeding is initiated within one hour after birth;
- Mothers successfully maintain lactation during periods of separation from their babies, including expressing breast milk by hand;
- Mothers are aware of the dangers of mixed feeding
- All mothers who choose not to breastfeed, or feed expressed breast milk, use feeding cups as opposed to bottles;

- Mothers who have made an informed decision not to breastfeed, prepare, store and use suitable commercial infant formula feeds safely;
- Non-breastfed infants are fed with a commercial infant formula until the infant is 12 months old;
- Mothers participate in community-based infant feeding support groups post discharge from hospital;
- Mothers attend the well-baby clinic monthly for monitoring infants growth and development; and
- All infants and children are fed appropriate, nutrient dense and easily ingested complementary foods after 6 months.

3.5 The Impact Sought

Promotion of optimal breastfeeding aims to reduce infant morbidity and mortality (particularly related to diarrhoea and acute respiratory infections), as well as healthcare related needs and expenses; improve cognitive and psychosocial development and active learning capacity; improve economic and physical productivity as well as reproductive health in later life.

3.6 Assumptions Made about the Intervention's Theory of Change

A key success factor in Behaviour Change component is health care providers' ability to persuasively advocate for specific behaviours on the part of the mother. Nurses and counsellors are responsible to influence the persuasion process in such a way that the mother achieves the desired change in attitude, behaviour, and skill level related to breastfeeding.

The successful implementation of the breastfeeding intervention hinges on commitment and support of DOH management; sufficient human resources (quality and quantity) for management and delivery; staff continuity; integrated strategic planning and monitoring between Child Health, PMTCT, ANC, Maternity, and Nutrition; and strong linkages between health facilities and community structures, such as breastfeeding support groups.

Finally, monitoring and evaluation (M&E) must focus on all components of the intervention to ensure that a multi-faceted approach is being carried out. Unfortunately, many M&E systems for breastfeeding only measure breastfeeding practices among mothers and babies, but this limits managers' ability to manage and improve the implementation of all components.

4 POLICY FIT FOR THE LOCAL CONTEXT

Numerous DOH policies and guidelines reference the need to support and promote breastfeeding (Table 3). Combined, they address the components indicated above, except for the Workplace Opportunities component for which there is currently no legislation, policies, or strategies. Notably, neither the Basic Antenatal Care guidelines nor the DOH NSDA[17] make any reference to breastfeeding.

Besides the DOH, no other government department explicitly promotes breastfeeding for enhanced health and well-being in South Africa.

Table 3: Breastfeeding-Relevant Legislation, Policies, Strategies, Guidelines

Year	Responsible Department	Legislation, Policies, Strategy, Guidelines	Enforce Intl Code	Behav Change	MBFI	Workplace Opps
Legislation						
2012	DOH	**Regulations Relating to Foodstuffs for Infants And Young Children**. Update to Foodstuffs, Cosmetics and Disinfectants Act 54 of 1972 (R.991 updated 2012/12/06).	X			
2010	DOH	**Regulations Relating to the Labelling and Advertising of Foodstuffs**. Update to Foodstuffs, Cosmetics and Disinfectants Act 54 of 1972 (updated and last amended 2012/01/19); **Guidelines relating to the labelling and advertising of foodstuffs** (applicable to R146/2010 for compliance purposes).	X			
Policies						
2013	DOH	**Infant and Young Child Feeding Policy** (replaces 2007/8 policy)[18]	X	X	X	
2011	DOH	The Tshwane **Declaration of Support for Breastfeeding** [7]		X	X	
2010	DOH	The **National Integrated Nutrition Programme** – Policy Summary and Guide[19]				
No date	FS DOH	Provincial Nutrition Supplementation Policy				
Strategic Plans						
2013	DOH	**Negotiated Service Delivery Agreement**				
2013	DOH	**Roadmap for Nutrition in South Africa** 2013-2017	X	X	X	
2012	DOH	**Strategic plan for maternal, newborn, child and women's health and nutrition** in South Africa 2012-2016[20]	X	X	X	
2012	DOH	South Africa's National **Strategic Plan for a Campaign on Accelerated Reduction of Maternal and Child Mortality** in Africa (CARMMA)[21]		X		
Guidelines						
2013	DOH	A Conceptual Framework on Human Milk Banks in South Africa	X	X		X
2012	DOH	In-patient treatment of severely malnourished children (10 steps to management of severe acute malnutrition)				
2012	DOH	Breastfeeding Q&A Guide		X		
2012	DOH	Supplementary feeding Programme	X			
2010	DOH	**Clinical Guidelines: Prevention of Mother-to-Child Transmission** (includes Guidelines on HIV and Infant Feeding) Revised March 2013		X		

Year	Responsible Department	Legislation, Policies, Strategy, Guidelines	Enforce Intl Code	Behav Change	MBFI	Workplace Opps
2007	DOH	**Guidelines for Maternity Care** in SA[22]		X		
2005	DOH	**Integrated Management of Childhood Illnesses (IMCI)** Handbook (revised 2011)		X		
No date	DOH	BANC Basic Ante-Natal Care[23]				
No date	DOH	**Mother Baby Friendly Initiative**			X	
No date	KZN DOH	Guidelines for the establishment and operation of Human Milk Banks in KZN				

5 FINDINGS: IMPLEMENTATION

Promotion of breastfeeding rests primarily with Department of Health (DOH), although in April 2013 the Department of Public Service and Administration (DPSA) launched guidelines for establishing child care facilities in public sector workplaces in order to protect breastfeeding among female public sector employees[24].

At provincial level, the DOH is mainly involved in promoting and supporting breastfeeding, although in the EC, the DSD's Social Auxiliary workers (SAW) also reportedly conduct nutrition awareness and education at home level where the importance of exclusive breastfeeding is emphasised.

Various interdepartmental coordination mechanisms have been established for nutrition at provincial level (e.g. the EC Integrated Food Security and Nutrition Programme, the KZN OSS structure, and the WC provincial Food and Nutrition Workgroup), but it is not clear to what extent breastfeeding promotion is addressed through these coordination mechanisms.

Numerous non-governmental partners assist the DOH with its breastfeeding promotion efforts as detailed in section 6 below.

Within the health sector, there is a recognition of a strong vision for breastfeeding promotion, especially since the launch of the Tshwane Declaration in 2011[7]. However, it is not possible to determine the allocation of financial resources for each breastfeeding component as these cannot be disaggregated from the overall nutrition line item in the APP budgets. Likewise, human resources for breastfeeding cannot be determined apart from general human resources for health and nutrition.

The implementation situation for each breastfeeding component are discussed below.

5.1 Enforcement of South African Regulations based on the International Code

Institutional Context and Culture: In late 2012, the Department of Health issued revised regulations relating to the marketing of infant formula, milks, and complementary foodstuffs for infants and young children[25]. These regulations give effect to the principles and aims of the WHO International Code of Marketing of Breast Milk Substitutes[14] dealing with labelling, marketing, educational information, and responsibilities of health authorities. The revised regulations are designed to remove commercial pressures from the infant feeding arena to protect breastfeeding as the best infant feeding option, to ensure that all parents receive independent and objective information

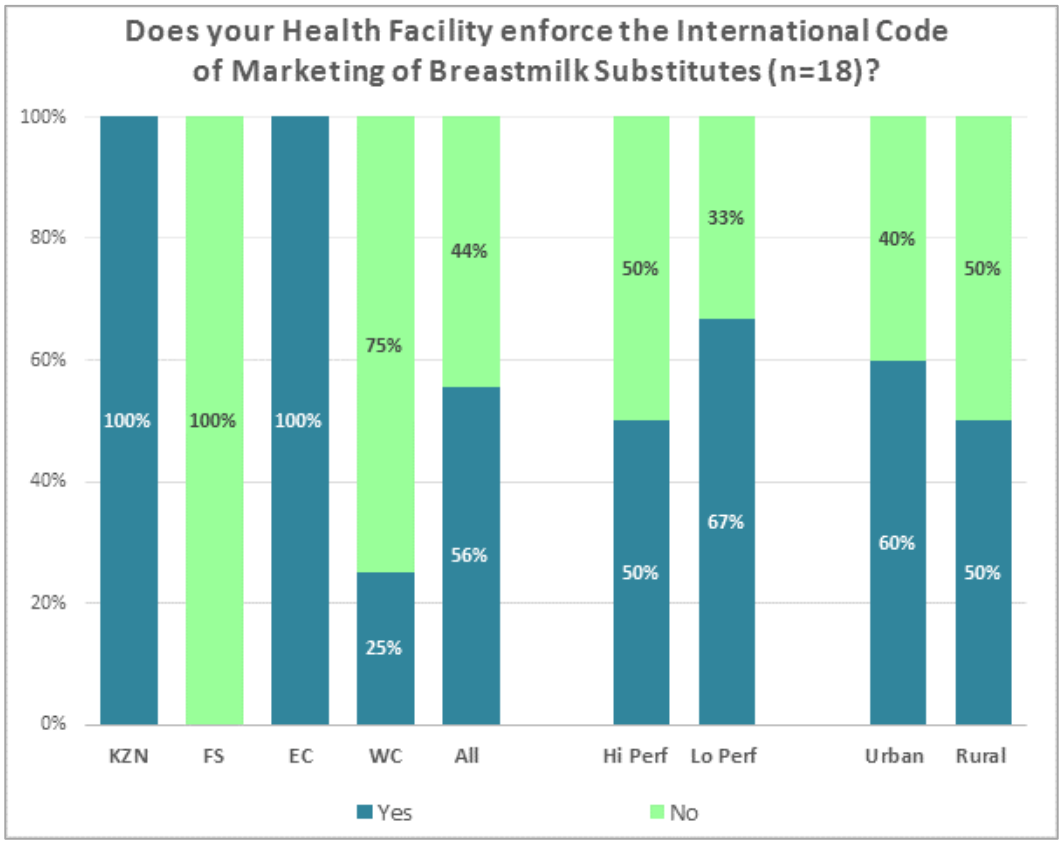
about infant feeding, and to ensure that all mothers who wish to breastfeed are supported to do so. The regulations contain requirements around (i) labelling and packaging of the formula/milks/ complementary foods (as well as feeding bottles/cups/ teats) including mandatory minimum nutritional information, and (ii) prohibitions around displaying or distributing any materials provided by (or bearing the logos of) infant formula manufacturers. Implementation of these requirements will begin in December 2014.

The passing of the regulations demonstrates the Government's leadership in establishing a legal framework for this component of the Breastfeeding Promotion Intervention. DOH Environmental Health Practitioners (EHPs) at local authority level are designated as the monitors and enforcers once the regulations go into effect in late 2014. Until now, however, monitoring and reporting of non-compliance with the International Code relied heavily on the initiative of individuals to report any violations.

In this study, respondents at health facilities were asked if their facility enforced the International Code (Figure 10) and some differences are seen across provinces, "high" and "low" performing districts, and urban and rural clinics. EC and KZN respondents were unanimous that their health facilities enforced the code, while no respondents from FS and only 25% of respondents in WC indicated that the Code was enforced at their health facilities.

Resource Allocation - Financial and HR: The costs associated with establishing the revised regulations and enforcing them cannot be determined, as they are part and parcel of the DOH's nutrition budget. It appears, however, that no human resources have yet been specifically designated to monitor the compliance with the regulations or to establish the activities recommended in section 3.1.1 above, although the inspectors are to be appointed by the Director General (DG) of Health.

Figure 10: Perceived Enforcement of the International Code at Health Facility Level



Standards/Norms/Guidelines/Protocols: The regulations themselves prescribe the implementation parameters private companies who manufacture infant foods. Otherwise, there are no other standards or protocols to guide the delivery or monitoring of this component.

Institutional Capacity for Implementation: Implementation of the regulations relies on engaging EHPs at local level, and according to the recent Human Resources for Health Strategy[26], there are generally sufficient numbers of this cadre in South Africa.

Coverage and M&E Systems: Because no indicators exist for monitoring the regulations, there are no readily available data on the number of incidents of non-compliance.

One option for establishing indicators is the benchmarked scores from Access to Nutrition Index (ATNI)[27] developed by MSCI ESG Research, with funding from the Gates Foundation and the Global Alliance for Improved Nutrition (GAIN). The indexed scores provide a measure of companies' compliance with the International Code, and are based on following criteria matched to the relevant sections of the International Code:

- Responsible marketing (Article 5)
- Support for healthy diets and active lifestyles (Article 4)
- Product labelling (Article 9)
- Health and nutrition claims (WHA Resolution 63.23)

At this time, there are no country-specific scores, but at a global level ATNI has found that 5 companies that manufacture breast-milk substitutes are reported not to be in compliance with the International Code[27]. These scores may assist the DOH in monitoring compliance with the newly revised regulations.

Beneficiary Engagement: There are no fora where government and companies can interact around the Code, the government's regulations, and the companies' performance.

Communication about the Intervention to the General Public and Within Government itself: Many persons interviewed for this evaluation were familiar with the international code, given the expansive training on the IYCF guidelines, although they did not always believe that the regulations were enforced (Figure 10). This suggests the need to re-train health professionals on the revised regulations to ensure their understanding and compliance.

There is also an opportunity for the government to establish a stronger "counter-marketing" strategy with private health practitioners. This involves distributing non-commercial posters and educational materials on breastfeeding to the offices of paediatricians, family practitioners, obstetricians/ gynaecologists, and nurse-midwives. The objective of this is would be to replace the materials being provided by commercial manufacturers.

In addition, the Government could build stronger relationships with local health and medical associations for paediatricians, obstetricians/gynaecologists, family practitioners, and nurses to discourage the use of informational and educational (IEC) materials provided by or bearing the logos of infant formula manufacturers.

5.2 Behaviour Change

Institutional Context and Culture:

Behaviour change is facilitated through nutrition education and counselling in health facilities. Nurses implement breastfeeding counselling and education, sometimes with the support of facility-based counsellors. Counselling and education are not delivered as a separate service, but are integrated into BANC, maternity, post-natal care and PMTCT services, sometimes with follow-up support at home by CHWs or NGOs/CBOs.

KZN and EC provinces use community-based staff (CHWs or CCGs) or NGOs to promote breastfeeding through community education, home-based counselling, and establishment of breastfeeding support groups - although such groups are generally established for HIV-positive women in conjunction with PMTCT services. A monthly breastfeeding support group based at a clinic in Chris Hani district (EC) has been credited with a reduction in diarrhoea among children 0-6 months. NGOs such as Mentor Mothers from Philani and M2M assist EC health facilities with supporting breastfeeding promotion and complementary feeding (see section 6.3 below).

The KZN DOH plan to implement community based breastfeeding support groups has not taken off in all areas of the province. One clinic in KZN has established Infant Feeding Committees to promote optimal infant feeding practices in their catchment area.

In addition, Human Milk Banks have been established in many health facilities throughout the country. These support exclusive breastfeeding for babies who cannot be breastfed for reasons such as a mother's illness, pre-maturity, orphan hood, etc. In South Africa, three models of breast milk banking exist:

- The Hospital Model: the milk bank is situated within a hospital's neonatal unit and run by the neonatal unit staff. Numerous public sector hospitals have established milk banks in their neonatal units.
- The Public-Private Partnership Model: This model is used by the South African Breast milk Reserves http://www.sabr.org.za/ [28] [29]which operates drop-off centres and supplies breast milk to both private and public sector hospitals throughout South Africa.
- The Community-Model: iThemba Lethu (www. ithembalethu.org.za), is a transitional home for orphans and abandoned children. Breast milk is donated directly to the home and provided to all babies less than six months of age. HIV-positive babies are fed with donated milk until they are 12 to 18 months old to boost their immune system.

In this evaluation, no DOH respondents indicated any backlash associated with the withdrawal of formula milk from health facilities in 2011, and beneficiaries confirmed that the messages on breastfeeding are being delivered at ANC, maternity, and post-natal health services.

Resource Allocation - Financial and HR:

Financial resources directly attributed to breastfeeding promotion cannot be determined separately from the financial resources allocated to nutrition. Although WC-DOH has had a relatively stable nutrition budget over the last few years, declining

The South African Breastmilk Reserves (SABR)

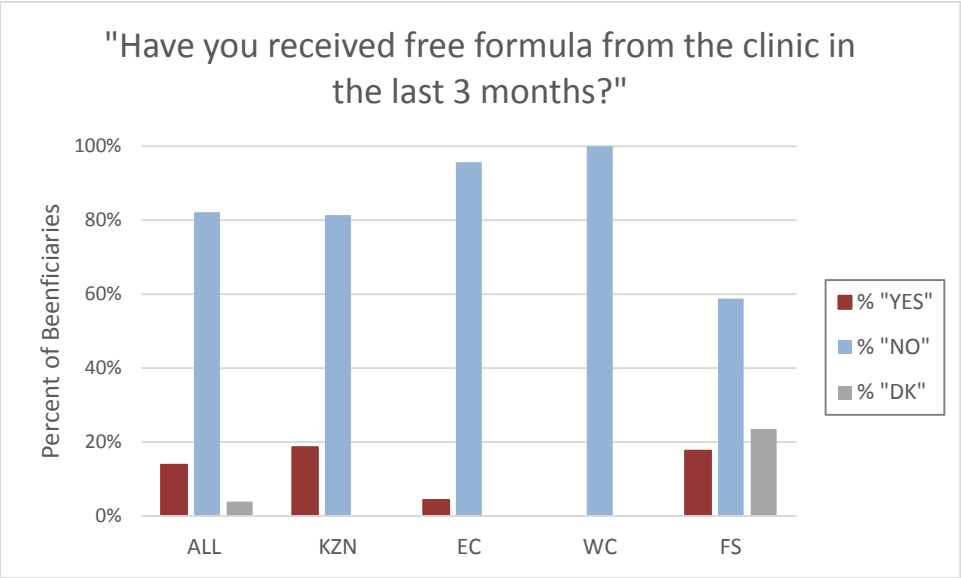
- The SABR facilitates 24 human milk banks in hospitals.
- There are 10 milk collection corners, which operate at a lower capacity than the milk banks.
- 13 milk banks are situated in public hospitals.
- 11 milk banks are located in private medical centres.
- 64 hospitals are supplied with human milk across SA.
- 1 278 infants were breastfed through the SABR in 2012.
- Between 800-1 000 donors supply breast milk each year.
- 4 new milk banks are in the process of being established.

budgets for nutrition are seen in KZN, FS, and EC. Budget constraints are a barrier to effective and successful implementation of the breastfeeding intervention, affecting staffing levels as well as the availability of supplies and transport for outreach work.

In health facilities, many respondents (58%) identified insufficient staffing as a constraint to effective delivery of behaviour change activities, and identified a need for additional staff, in particular, nutritional advisors, counsellors, or dieticians, were recommended to improve both implementation and quality of implementation at clinics.

Coverage: At national level, the newly released SANHANES data (2012) provides a more current measure of the extent of breastfeeding practice in the country as discussed in section 2 of this report. However, there is no data in the DOH routine information system (e.g. DHIS) that report on the extent of behaviour change activities in health services, nor is there any national-level survey data that describes the reach or quality of behaviour change interventions. Therefore, the reach or coverage of breastfeeding counselling and education is not possible to determine.

Figure 11: Beneficiaries who received free formula from clinics



In beneficiary FGDs conducted as part of this evaluation, 80% of beneficiary respondents indicated that they had been educated about the importance of breastfeeding during BANC and delivery. Fewer beneficiaries mentioned that they received feeding counselling during post-natal care. This demonstrates that the messages are being delivered, albeit before birth, and not during the period when breastfeeding occurs.

Fourteen percent (14%) of beneficiaries – mainly in KZN and FS – reported receiving formula from nurses or dieticians at health facilities (Figure 11). Although no respondents from the WC reported receiving formula, one respondent in the EC said that she received formula from a clinic based in the WC.

Standards/Norms/Guidelines/Protocols: The behaviour change guideline commonly cited by managers and facility-based health workers alike was the Infant and Young Child Feeding Policy. In addition, a few facility level respondents noted the utility of Breastfeeding and HIV Guidelines (WC) and Growth Charts (KZN), while managers across all provinces and levels also mentioned the Tshwane Declaration and the MNCWH Strategic Plan (2012-2016). Other documents highlighted during provincial fieldwork, include KZN's "Guidelines for the establishment and operation of Human

Milk Banks in KZN", the "Little Green Book of Breastfeeding Management"[30] mentioned by WC respondents, and the "Mother, Child Health and Nutrition Handbook" in the EC. Nutrition training curricula from various NGOs (Philani, Mothers2Mothers) were also mentioned as guides for implementation breastfeeding education and support.

Knowledge of the documents didn't always match the availability of the documents at health facilities. Some clinics in visited during this evaluation were not in possession of these guidelines, particularly in Eastern Cape and Free State provinces (Table 4). One explanation may be poor distribution of documents, as one noted by one respondent: *"Glossy policies from national… only photocopies at provincial level … and nothing submitted to (or available at) the districts".*

But other respondents noted that often nurses do not read policy guidelines due to high volumes of work and time constraints, and therefore it would be more productive to have such guidelines converted into wall-chart protocols or SOPs to facilitate implementation.

Table 4: Availability of Breastfeeding Relevant Guidelines at Health Facilities

Guidelines	% of health facilities visited where guideline was available				
	EC	FS	KZN	WC	Ave
Malnutrition Supplementation programme register	80	86	100	100	**94**
Nutrition Supplementation Guide	70	100	100	90	**91**
Guide for HIV and Infant feeding	70	86	89	80	**82**
Protocol for management of severe malnutrition	20	100	89	100	**76**
Practical guide for optimal infant and young child feeding (IYCF)	70	57	100	40	**68**

M&E systems: The DHIS contains no indicators to track the achievement of the new breastfeeding policies – i.e. the "number of infants exclusively breastfed at 6 months", or the "number of 24-month old children who are still breastfed". There is one indicator, however, "*the number of infants exclusively breastfed at Hep3 dose rate,* which is meant to monitor infant feeding practices at 14 weeks for identifying where community interventions need to be strengthened. However, this indicator only came into effect in April 2013, and as such there is little data available to determine coverage. Moreover, this indicator will overestimate exclusive breastfeeding prevalence as it is counted at a time that is inconsistent with aims of the new breastfeeding policies and strategies (i.e. at 14 weeks rather than 6 months).

At provincial level, KZN indicated that it collects data on 2 additional indicators that track the implementation of breastfeeding interventions:

- *Early initiation of breastfeeding*— defined as the proportion of children who were put to the breast within one hour of birth.
- *The proportion of HIV infected mothers who exclusively breastfeed when they are discharged from hospital post-delivery.*

In addition, the KZN DOH conducted a key evaluation of IYFC policy in the province (through UKZN Public Health Medicine) with the hope of improving the effectiveness of exclusive breastfeeding.

Institutional Capacity for Implementation: Nurses, nursing assistants, or CHWs who are expected to deliver this component usually receive special training on breastfeeding policies and the Infant and

Young Child Feeding (IYFC) Guidelines to ensure that quality services are rendered and that quality control measures are in place. However, the extent of training varies across provinces. In both the WC and KZN, 7 of 8 clinics reported that their clinic staff had received nutrition training. In WC, staff participated in a 20-hour training on breastfeeding. KZN DOH also conducted training for Community Care Givers (CCGs) to accelerate community-based maternal, neonatal, child and women health and nutrition support.

In contrast, FS and EC reported much lower levels of nutrition training. In FS, 6 of 7 clinics said that only some of their staff received nutrition training in the last 2 years. In the EC, only 2 of 8 facilities reported that staff received nutrition training in the past 2 years; 5 of 8 facilities reported no nutrition training at all for their staff. EC-DOH respondents indicated that staff need refresher training on all nutrition interventions, but especially on growing food gardens, training community liaison officers on Infant and Young Child Feeding policy, and growth promotion and monitoring.

Despite training, respondents repeatedly cited a variety of barriers to delivering this behaviour change component – namely, health workers' weak skills, lack of time, staff shortages, and/or frequent staff changes due to attrition or rotation (particularly in the EC). In the WC, nursing staff were reported to be overstretched in providing a range of PHC services (e.g. breastfeeding and nutrition counselling for adults and children, as well as TB and ANC services), and this was believed to compromise the quality of nutrition education and counselling services delivered. Also in the WC, some respondents believe the new breastfeeding policy has increased the workload for nurses, and as a result, counselling is treated as a "tick box" activity that isn't implemented correctly due to lack of time, commitment or motivation. FS-DOH managers report that despite training, many staff have exhibited a hesitancy to embrace the new policies, and rather see it as a separate activity apart from BANC, maternity, and post-partum care.

Time and staffing constraints limit health workers' ability to (i) fully digest and understand the new IYCF policy guidelines, (ii) attend training on breastfeeding promotion, (iii) give adequate time to patients who really need support, especially mothers with breastfeeding difficulties, (iv) counteract widespread social and cultural barriers to good breastfeeding practice (particularly mixed feeding in the first 6 months) and (v) counteract stigma around HIV and breastfeeding.

Indeed, when nurses' knowledge around breastfeeding was assessed as part of this evaluation, nearly 50% were unable to identify a diagnostic action (Figure 12) or counselling action (Figure 13) that they would take to help a mother. Very few nurses (only 30%) noted that they would counsel mothers on the importance of breastfeeding when a young child (<2) was ill – a troublesome finding as it is widely acknowledged that most mothers only bring their infants over 4 months of age to the clinic when they are ill.

Across the four provinces, nurses' general nutrition knowledge was highest in KZN and lowest in EC (Figure 14).

Figure 12: Diagnostic Actions taken by Health Workers related to Breastfeeding Difficulties

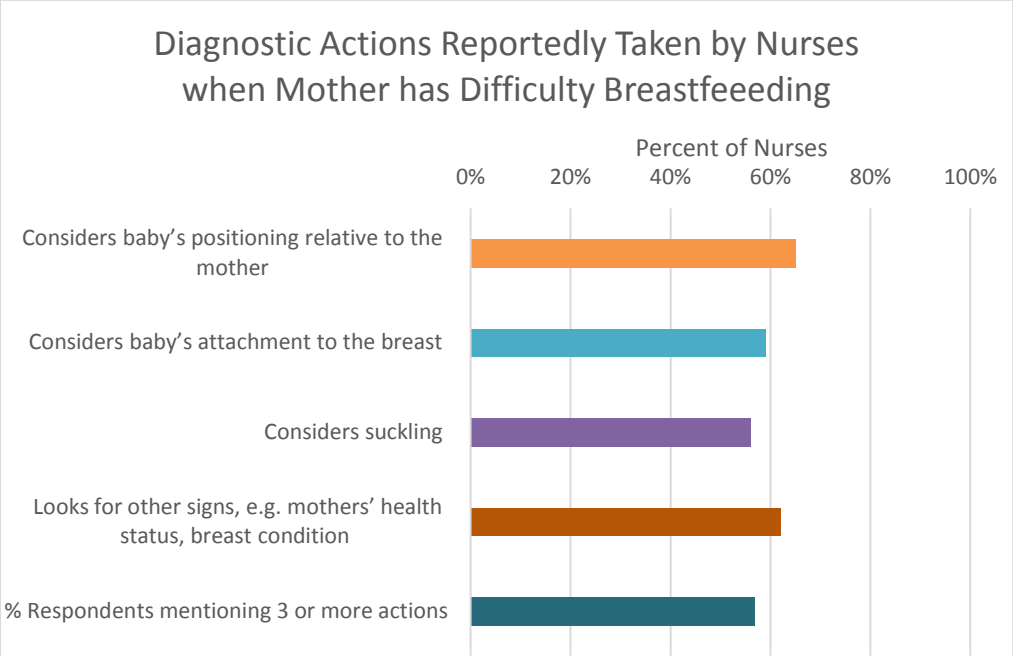


Figure 13: Counseling Actions taken by Health Workers related to Breastfeeding Difficulties

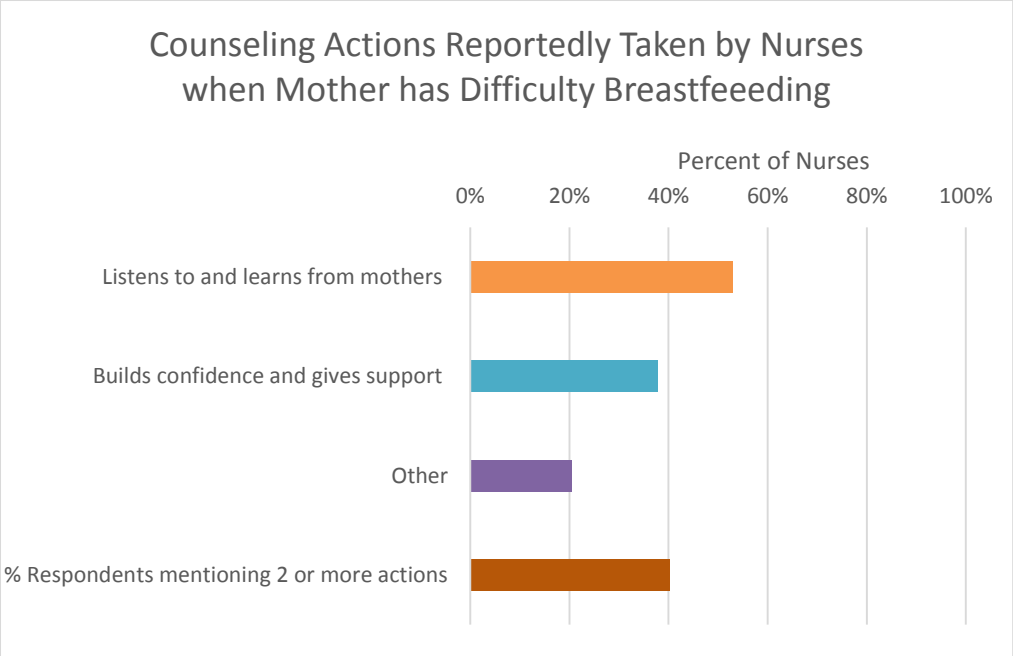
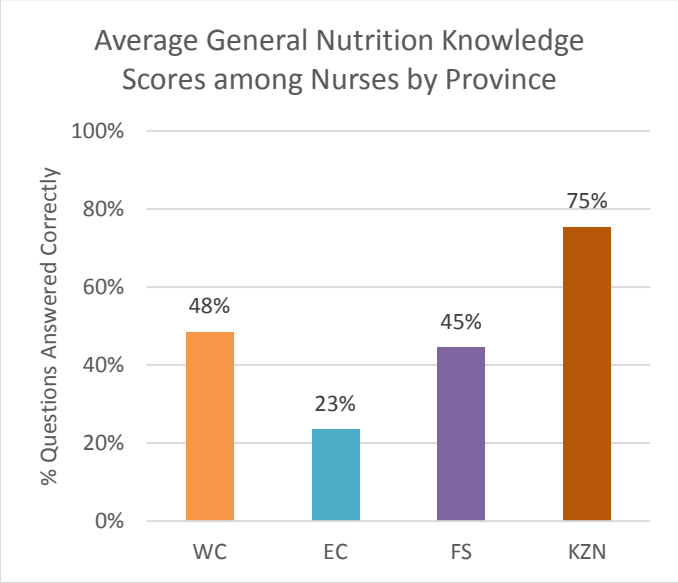


Figure 14: General Nutrition Knowledge Levels among Nurses



To address these constraints to better services delivery, many respondents at management and facility levels recommended deploying more staff (i.e. nutrition counsellors or dieticians) at health facilities as well as building stronger community outreach and linkages with CBOs to better support breastfeeding within communities. Indeed, the contributions of NGOs and CHWs in providing follow-up support and counselling were noted as a means to counter staffing constraints in health facilities. The EC-DOH promotes community outreach as part of its response to implementing PHC re-engineering and CHWs are expected to give direct support to mothers at their homes by helping mothers with correct positioning of the baby for latching to the breast, expressing milk; and cooking and general home hygiene. One clinic in Chris Hani district (EC) reported that they actively promote breastfeeding at community level through campaigns (e.g. messages on nutrition abuse were included in the 16 Days of Activism Against Women and Children Abuse campaign; World Breastfeeding Week). However a shortage of transport for community outreach was noted as a constraint in EC and KZN. In addition, KZN District Nutrition Managers reported that they are unable to regularly visit all the sites as expected even with adequate transportation, and therefore additional positions for sub-district nutrition coordinators were required to ensure that all facilities are supported regularly.

The adequacy of material resources for breastfeeding promotion varied across provinces. In rural KZN, there were no IEC materials in clinics regarding exclusive breastfeeding; however, it was indicated by all health facility respondents (100%) that this was not a constraint to educating mothers, as 'word of mouth' communication works better than printed IEC materials. In addition, some mothers at the rural Thengane clinic indicated that the Road to Health booklet contains enough information to assist mothers to feed their babies successfully and correctly.

In EC, breast pumps for lactating women to express milk were in short supply, and IEC materials were not translated into the local language. In the EC, respondents also noted the need for audio visual solutions for demonstrating breastfeeding at CHCs and hospitals.

In the WC, 50% of clinics were found to lack adequate infrastructure (e.g. limited waiting areas, consulting rooms, and counselling rooms) and materials to effectively deliver nutrition programmes.

Beneficiary Engagement:

As noted earlier, beneficiary FGDs revealed that 80% of respondents had been educated about the importance of breastfeeding during BANC, maternity, and/or PMTCT services. Many beneficiaries reported that they were given clear and consistent messages around exclusively breastfeeding for 6 months, and avoiding mix feeding. In the EC mothers were also counselled not to give babies traditional medicine (*izicakathi*), and in the WC, mothers were counselled to avoid alcohol and tobacco. Beneficiaries in the EC also noted that the information given by nurses on exclusive breastfeeding was useful as they found that their children were not sick often and had fewer episodes of diarrhoea.

However, health workers and the vast majority of beneficiaries reported that optimal behaviours were not followed due to a wide range of social, cultural, and structural reasons:

- In KZN, many beneficiaries were teenage mothers, who saw their chances of exclusively breastfeeding limited because they still attend school, or because the baby is looked after by a grandmother.
- HIV positive mothers fear transmitting HIV to their babies and hence choose not to breastfeed (KZN, WC). In the WC it was noted that women who have been on ARVs for longer times are the most reluctant to breastfeed.
- Beliefs that if young mothers breastfeed, their breasts will become less attractive (KZN, EC)
- Stigma is also a factor. In KZN, a small group of mothers indicated that exclusive breastfeeding (compared to mixed feeding) is strongly associated with the HIV positive status of a mother, so they feared being stigmatized.
- In the WC, beneficiaries noted that exclusive breastfeeding for the first 6 months is not a strong cultural practise, and adequate support and clear advice around formula feeding makes it a safe method of infant feeding.

Barriers / Challenges to Breastfeeding Practice reported in EC

Lack of attendance at ANC and PMTCT

- Late booking of mothers for Basic Antenatal Care (BANC).
- Mothers do not access services at the clinic after their children have been immunised at 6 months.
- Many mothers do not have means for transportation and their villages are too far from the clinic.

Non-adherence to, or poor understanding of, health education provided by the health facility

- Mothers do not follow PMTCT guidelines, they mix feed which increases the risk of HIV infection.
- HIV positive mothers are hesitant to breastfeed because they are unsure if their child will be infected with HIV, so by and large they choose not to breastfeed.
- Women mix feed because they say their children "don't get satisfied".

Stigma surrounding HIV and AIDS

- Women who breastfeed exclusively are suspected to be HIV positive by those who mix feed because it is "known" that HIV positive women should not mix feed. This makes HIV positive women reluctant to exclusively breast-feed.
- People don't like support groups because they associate them with HIV and AIDS (HIV stigma).

Lack of support groups

- There are inadequate breastfeeding support groups for mothers.
- Teenage mothers often lack access to support groups, and may not know how to deal with engorged breasts or mastitis.

Lack of nutritional support for lactating mothers

- Widespread unemployment and poverty may mean that mothers themselves are malnourished

Lack of transport, geographical location, and migrant labour

- Shortage of transport for CHWs to get to distant villages impedes service delivery.
- Given high migrant labour in many areas of the province, many mothers leave their children with grandparents; these children can only be formula fed.
- Mothers are not allowed adequate maternity leave for them to continue to breastfeeding exclusively.

Peer pressure amongst young mothers

- Young women might be concerned about breastfeeding changing their looks (i.e. breasts); 16 year olds struggle with breastfeeding for this reason.

Cultural factors

- If the baby was delivered at home, mothers do not come to the clinic or hospital until 6 days later, due to beliefs around the prescribed period before a mother takes the baby out of the house ('efukufukwini').
- Strong use of traditional medicines among newborns and young children especially in rural communities in direct contradiction to health education.
- A myth that a snake will suckle from a lactating breast generates fear of breastfeeding amongst mothers.

Social influence and incorrect feeding practices

- Family members and other influence mothers as to what to feed their children, often countering what is taught in clinics. Sometimes mothers are discouraged from exclusively breastfeeding their children.
- Expressing breast milk and keeping in the fridge is considered taboo or might be talked about negatively amongst the elderly.
- Makotis (daughters-in-law) say that mothers-in-law insist that the baby be given sweet water (sugar and water) so that the baby can pass a black stool.
- Mothers from Kerstel in Chris Hani District give their children sour liquid porridge called 'inqathi' which can lead to their babies being malnourished if not fed at the right time or prepared in a nutritious way.
- Alcohol abuse, as it leads to neglect of children and poor breastfeeding habits by mothers

- Interference from relatives and fathers of babies strongly influence the mothers' choices to exclusively breastfeed in all provinces. In KZN, older relatives (grandmothers) believe that babies need to initiate soft solids foods as early as 3-4 months so the baby will gain more weight and appear healthy and strong. In the WC, older women who look after young children reportedly encourage early introduction of solids (i.e. "ouma meelbol").
- Some mothers stop when they develop breast sores.
- Some mothers who struggle to produce enough breast milk believe that their babies are not getting full and then start feeding soft porridges.
- Some mothers say their children don't like breast milk and therefore opt for formula.

Communication about the Intervention to the General Public and within Government Itself:

At national level, the Government has produced numerous printed materials and posters developed to promote the new breastfeeding policy[31] to the general public and to health workers, but there has been no mass media or social media effort at national level to communicate the new breastfeeding policy to the general public. Rather, each province makes its own efforts to internally cascade the new policy to service levels, through training or other methods. Both KZN and WC DOH have developed an internal communication strategy on IYCF Policy to ensure that communication on this policy is clear, simple and adequate.

In terms of communication to the general public, most is limited to group health talks and one-on-one education in ANC, PMTCT, maternity, and post natal well baby clinics. Some clinics also promote community education and campaigns to increase the general public's awareness, but this was not commonly mentioned. By and large, nutrition education at both DOH health facilities and in communities is said to be culturally sensitive and disseminated in the local language.

Three of the 4 provinces, however, have used mass media or other channels to promote the new Breastfeeding policy. When formula milk was withdrawn from health facilities in 2012 as part of the new breastfeeding policy, the EC found that building awareness through radio broadcasts was particularly useful to prevent backlash with regards to the change in policy. KZN DOH has used a variety of communication channels to promote exclusive breastfeeding: school health teams, radio advertisements, pamphlets, posters, health education at PHC, CHC and hospitals, CCGs, and healthy baby awards. In addition, KZN-DOH has managed to include the importance of exclusive breastfeeding in the KZN school curriculum for grades 8-10 as part of lobbying and advocating for social buy-in of exclusive breastfeeding. Likewise, WC DOH organises health events and campaigns (such as door to door exclusive breastfeeding campaigns, Breastfeeding Week), breastfeeding peer counsellor projects, and encourages NGOs to participate in community level activities. WC also developed a pocket for the Road to Health card with the following infant feeding and infant care messages emphasising exclusive breastfeeding:

- "Exclusive breastfeeding: babies need only breast milk for the first 6 months of life",
- "Breastfeed your baby as often and as long as the baby wants to feed",
- "Learn to know when your baby is hungry. The signs are, looking for the breast (rooting), putting the hands in the mouth and making suckling noises" and
- "Introduce solid food only after six months. Start with soft mashed foods and progress to solid family foods".

Despite these varied communications efforts, breastfeeding practices have not substantially improved, possibly because most communication delivered is "motivational" (i.e. to "sell" breastfeeding to mothers), rather than "solution oriented" (e.g. addressing specific problems mothers have with breastfeeding – such as how to express and store breast milk, or how to treat breast sores). No beneficiaries interviewed in this study had received any advice around such topics. Given the range of social, cultural, and medical barriers to breastfeeding that have been presented above, communication could be much more focused on behaviour change than awareness building.

5.3 MBFI Accreditation of Health Facilities

Resource Allocation - Financial and HR: Resources are assumed to be adequate for implementation of MBFI, as no respondents indicated a shortage of funds or personnel for maternity services. However, staff changes and the commensurate need for on-going training are cited as factors affecting implementation. Frequent staff changes in EC (due to attrition or rotation) were noted as threats to accreditation, as facilities can lose their accredited status because of staff changes. One provincial EC-DOH respondent indicated:

> *"The Mother Baby Friendly Institutions lose their status after 2-3 years because of staff changes (attrition and rotation from one service area to another). In some cases, there is a lack of buy-in by staff in a facility to the MBFI. Health workers take it for granted that they know breastfeeding, but are not able to deal with breastfeeding challenges that mothers have. It is important that they are orientated and trained so that they become convinced about exclusive breastfeeding and deal with the myths and beliefs that they hold. Nurses are still being trained. After training nurses are positive about exclusive breastfeeding when they were negative before."*

Institutional Context and Culture: Compliance with the "Ten Steps to Successful Breastfeeding" requires strong policies, the adequate, relevant and practical training of personnel, continuing support to mothers, and restriction on the use of breast-milk substitutes to clearly defined medical reasons.

The process for MBFI accreditation begins with an examination of the health facility's current practices to measure how they compare to the Ten Steps. The Hospital Self-Appraisal Tool, contains questions derived from the global criteria. After carrying out the self-appraisal, the province conducts an assessment, which is then followed by an external assessment to be conducted. Accreditation is valid for several years, after which institutions are reassessed to determine the compliance of the global criteria required to be re-accredited.

Coverage: By 2012, 51% of public sector health facilities in South Africa were MBFI accredited—277 of 545 health facilities with maternity beds[32]. But the Tshwane Declaration aims to have 100% of public hospitals and maternities accredited by 2015. Both WC DOH and KZN DOH report fast-tracking MBFI assessments and reassessments in preparation for national external assessments and reassessments of MBFI facilities.

Standards/Norms/Guidelines/Protocols: In the early 1990s, national DOH created a slightly amended version of the UNICEF/WHO "Ten Steps" document which was subsequently adopted by the South African Health Matters Committee. MBFI was officially launched in Bloemfontein in 1994.

Although the MBFI initiative has been implemented for nearly two decades, there are no readily-available official DOH guidelines for MBFI – the only document on the DOH website is an

announcement dated 1 August 1999 explaining the scope of MBFI. However, KZN has the 10 Steps Guidelines posted on its website[33].

M&E systems: The DOH collects information on the number of MBFI-accredited health facilities, and these numbers are captured in the annual MBFI internal reports. In the most recent APP, there is an indicator on the "*Proportion of health facilities in which deliveries are done that are MBFI accredited*" and targets are established for 2012/13 forward. In addition, the number of accredited facilities are reported in the DOH 2012 Annual Report. However, there is no data publicly available on MBFI prior to 2012.

Institutional Capacity for Implementation: A 2008 review[32] found that despite high rates of breastfeeding initiation in MBFI-accredited facilities, exclusive breastfeeding at 10 weeks of age had decreased significantly with 50% of mothers giving other food and liquids to their babies. The most common reasons for introducing other foods were milk insufficiency, baby not wanting to breastfeed, and advice by a family member or health worker[34].

In the 2008 review, as well as in 2 recent MBFI studies in Gauteng[35] and Cape Town[36], suboptimal practices were identified in MBFI accredited facilities. Poor performance in facilities were mainly attributed to "work pressures" on nurses brought about by high vacancies, attrition of staff, and resistant mothers. The steps that were most poorly carried out were those that required nurses to provide education, counselling, advice and support – e.g. step 5 (*showing mothers how to breastfeed*), step 8 (*encouraging breastfeeding on demand*), and step 10 (*breastfeeding support after discharge from the facility*).

In addition, the national DOH states that Step 4 (*place babies in skin-to-skin contact with their mothers immediately following birth for at least an hour, and helping mothers initiate breastfeeding within an hour of birth*) has been reported as a challenge across health facilities according to internal annual assessment reports[32].

Beneficiary Engagement: As indicated above, beneficiaries report receiving the information about breastfeeding during maternity, but the recent studies have shown the quality of the information and support to be weak, and this most likely diminishes the beneficiaries' uptake of exclusive breastfeeding. The numerous social and cultural factors described in section 5.2 also impede uptake.

Communication about the intervention to the general public and within government itself: Little information is publically available about the MBFI component, aside from the range of breastfeeding IEC materials discussed in section 5.2 above. Because this evaluation did not visit hospitals, it is not possible to determine the extent to which IEC for MBFI exists in hospitals and maternities.

5.4 Enhanced Workplace Opportunities for Breastfeeding

Institutional Context and Culture: There are no legal requirements for workplaces to establish opportunities for breastfeeding, although the "Code of Good Practice on the Integration of Employment Equity into Human Resource Policies and Practices"[37] within the Employment Equity Act states that employers should provide reasonable accommodation for parents with young children, including health and safety adjustments, an accessible, supportive and flexible environment, and consideration of flexible working hours and sufficient family responsibility leave for both parents. However, there is no mention in this Code of breastfeeding or infant feeding.

The Government recently drafted "Guidelines for Establishing Childcare Facilities" in government workplaces[38] at national and provincial level. In these guidelines, there is considerable recognition

of the importance of providing environments and structures to allow female employees to breastfeed. The guidelines are expected to be launched in 2013, and are meant to operationalise the Government's Health and Productivity Management Policy for the public service.

Resource Allocation - Financial and HR: The Government's childcare guidelines state that the costs for establishing, operating, and maintaining child care facilities will be borne by relevant government department per the Employee Health and Wellness Strategic framework. However, no APPs for any government departments have yet included budgets for this activity. The guidelines specifically mention the qualifications for workers in childcare facilities.

In this study, no respondent mentioned this component as part of the nutrition interventions that government delivers. In EC, however, one respondent noted that working mothers were counselled on how to express and store breast milk for the times when they were away from home for work or other reasons. Likewise, in the FS, one respondent noted that breast pumps are not readily available for mothers who work or attend school.

Coverage: As these guidelines have not been officially launched, there is no data available on the availability of workplace opportunities for breastfeeding within government workplaces. There is also no data on the extent of workplace opportunities in the private sector.

Standards/Norms/Guidelines/Protocols: The Guidelines[38] contain the standards and requirements for workplace opportunities in the public sector.

M&E systems: The guidelines do not yet contain indicators for monitoring the implementation of child care facilities and workplace opportunities for breastfeeding, although there is recognition of the need to establish process indicators.

Institutional Capacity for Implementation: Allocation of human or material resources for promoting workplace opportunities in the public sector appears to rely on existing budgets and staff.

Beneficiary Engagement: This component is not being implemented, therefore there is not yet any beneficiary engagement.

Communication about the intervention to the general public and within government itself: presumably, the guidelines will be disseminated within government once they are officially launched. There has been is no communication to the general public about the desirability for promoting breastfeeding in the workplace.

6 COORDINATION, REFERRALS, LINKAGES, AND PARTNERSHIPS

The successful implementation of a comprehensive "package" of nutrition interventions to targeted populations hinges on 3 implementation principles:

- strong strategic coordination between government departments,
- strong referrals between government departments at implementation level, and
- strong linkages and partnerships with community-based organisations or other institutions to extend the reach directly to households.

Each of these are further explored below.

6.1 Government Coordination

Breastfeeding promotion is largely an intervention carried out by the health sector, but other sectors can support it as well if they are engaged. Aside from DSD's SAWs who a few respondents said promote nutrition in the EC, and the DPSA which promotes childcare services in government workplaces, no other government departments are engaged in this intervention.

Numerous respondents at all levels, but particularly provincial and district levels, noted the absence of coordination between different government departments in terms of nutrition generally, and breastfeeding promotion specifically. Indeed, the lack of coordination between government departments for this (and other) nutrition interventions is evident by the pattern of responses received in the evaluation:

- Health sector respondents were able to comment on implementation of health-based nutrition interventions, but few respondents from other sectors (e.g. social development, agriculture, rural development, early childhood development) were able to comment.
- Likewise, health respondents were largely unable to comment on the implementation of nutrition interventions that were not health related (e.g. food security, gardens, food access, etc.).

These response patterns demonstrate the silo'd nature of implementation of nutrition interventions by government and the lack of coordination at all levels.

6.2 Referrals

The only referrals mentioned that were specific to breastfeeding were from health facilities to NGOs and CBOs who provide clinics with breastfeeding support. A list of the various NGO/CBO organisations providing this support is presented below.

6.3 Linkages with NGOs, Civil Society, and Private Sector

A wide range of organisations assist at national, provincial, district, and facility/community levels to promote breastfeeding (Table 5).

Table 5: Organisations providing Support for Breastfeeding

Name of Organisation	Description of Breastfeeding Support
Africare	Africare, an international NGO, supports PMTCT services in Eastern Cape.
Bosom Buddies	Bosom Buddies serves three state hospitals in Somerset West by providing practical and emotional breastfeeding support to needy new mothers
Catholic Welfare and Development	Catholic Welfare and Development, an umbrella organisation comprised of ten programmes and ten community development centres in the Greater Cape Metropole and in rural areas of the West Coast, Boland and Matsikama, provides breastfeeding peer counsellors for mothers in the WC.
FHI 360 Nutrition Assessment Counselling and Support Capacity Building (NACSCAP) project	NACSCAP works with health care workers and community caregivers to integrate and expand/improve maternal health and infant and young child feeding, particularly in the context of PMTCT. NACSCAP works to strengthen the DOH's capacity to deliver a comprehensive set of nutrition interventions as part of the national health care framework. NACSCAP works in all nine provinces and at selected priority district sites.

HACCO	HACCO, an NGO in EC, supports health awareness campaigns, transportation for the campaigns, and breastfeeding support groups.
Johnson & Johnson	Johnson & Johnson partners with DOH in delivering Healthy Baby Awareness. In addition, the company supports a variety of CSI initiatives, including financial, product, and technical support to the Salem Baby Care Centre in East London.
Kentucky Fried Chicken "Add Hope"	KFC Add Hope provided funding to an ECD centre in the Free State to purchase formula for young children at the centre, and for nutrition training (presumably of ECD centre staff).
La Leche League	La Leche League operates in 6 provinces of South Africa and provides information and support for breastfeeding mothers.
Mothers 2 Mothers (M2M)	M2M implements activities to improve the effectiveness of PMTCT in 7 provinces of South Africa, with the largest number of sites in KZN. M2M supports HIV-positive pregnant women, new mothers, and caregivers with various psychosocial support and empowerment services, including the establishment and supervision of community-based breastfeeding support groups. M2M also conducts curriculum-based training and education programs for psychosocial support and empowerment; interventions to increase uptake of counselling and testing services; and links PMTCT treatment/care to antiretroviral treatment (ARV) and other health services.
PATH	PATH supports the DOH with a wide range of nutrition related activities in South Africa. PATH has helped to develop training and counselling materials (e.g. flip charts) focused on optimal IYCF, including breastfeeding and feeding ill children. PATH works with FHI360 on the implementation of NACSAP. PATH convened the Human Breast Milk Banking Technical Group that recently met in Seattle and is developing a framework for the implementation of Milk Banking. PATH trains health care providers in the full spectrum of essential newborn care, including counselling on immediate breastfeeding. PATH supported the NDOH in revising national guidelines on feeding young children, ensuring that they are aligned with international best practice, and supports various efforts to curb malnutrition (e.g. radio spots about Vitamin A supplementation, growth monitoring, de-worming, and catch-up immunisation).
Philane Zithulele Mentor Mothers	Philane operates in EC and WC to assist the DOH with breastfeeding support. Philane works closely with MBFI Hospitals to provide postnatal breastfeeding education, and to support mothers and family members in health and breastfeeding. "Mentor Mothers" attend community meetings and give talks on health education concentrating on exclusive breastfeeding, and visit homes to assess the health and welfare of children. They weigh children to monitor their growth (using their own portable weighing scales), give nutrition counselling and support to mothers using Q cards with simple pictures and in the local language, identify and address cases of moderate malnutrition, and aid in their management.
The Etafeni Day Care Centre Trust	Etafeni provides holistic community-based care for AIDS-affected and vulnerable children and their caregivers in Nyanga township in Cape Town. Among various programmes, they run a Breastfeeding Peer Counsellor Project in Nyanga, Cape Town.
The Government of Brazil	Brazil has supported the KZN provincial DOH Nutrition Directorate to establish human milk banks in the province.

The South African Breast milk Reserve (SABR)	SABR is an NGO that runs human milk banks in both the private and the public health care facilities in South Africa. SABR runs 17 human milk banks and 14 SABR Corners that supply human breast milk to more than 40 hospital facilities in 8 provinces of South Africa.
The Treatment Action Campaign (TAC)	TAC trains peer educators on nutrition and health promotion for people living with HIV/AIDS, including safe infant feeding in the context of HIV.
UNICEF	UNICEF provides a wide range of technical, material, and financial support for improving infant and child feeding.
US AID and US CDC	The US Government, through USAID and CDC, provide funding and technical support for HIV and nutrition in South Africa.

7 RESULTS

Institutional Context and Culture:

With the exception of Workplace Opportunities for Breastfeeding, the DOH has sufficient institutional structures to implement the Breastfeeding Support intervention at national, provincial, district, and local levels. However, staff shortages at health facilities have created heavy workloads for facility staff, and this has often compromised the quality of the interventions' delivery.

Integration of Breastfeeding into BANC, PMTCT, maternity, and post-natal services is an implementation strength. However, in these services and through MBFI, the focus is largely on building awareness of the importance of breastfeeding (i.e. "selling" breastfeeding to pregnant mothers) through education during pregnancy. After birth, the quality of breastfeeding promotion is compromised due to nurses' weak skills in directly supporting breastfeeding behaviours, i.e. showing mothers how to breastfeed, encouraging breastfeeding on demand, providing breastfeeding support after discharge from the maternity, and providing solutions to breastfeeding problems.

An interviewee in the EC posited an opposing view on the present delivery channels for breastfeeding. This individual suggested that PHC, CHC and maternity hospitals are not the most effective delivery channels for supporting exclusive breastfeeding, although they are the first point of education. Rather, more focus should be given to outreach directly to new mothers' homes in order to ensure better adherence to education, better monitoring, and to provide better support to mothers, especially within the critical 7 day post delivery period.

While PHC re-engineering will provide the health sector with mechanisms for improved community outreach, it is in the early stages of implementation and cannot be fully exploited at this time for this particular intervention. Likewise, numerous NGOs assist the DOH with breastfeeding promotion, but none of these operate at scale, and there is a lack of systematic engagement with NGOs for nutrition or breastfeeding support. In addition, there are few breastfeeding support groups established at facility or community level.

There is little evidence of any coordination between DOH and other government departments in delivering Breastfeeding Support. But this could be improved, especially in leveraging the DSD's Social Auxiliary Workers, who can be co-opted to extend the breastfeeding messages and provide follow-on support to mothers in their homes.

Resource Allocation - Financial and HR:

DOH nutrition budgets have largely declined or stagnated since 2008 at national level and in each of the 4 provinces where fieldwork occurred, although Western Cape has managed to protect its budget more than other provinces. In addition, many respondents at all levels indicated the need for additional human resources to better implement Breastfeeding Support, especially counsellors and nutrition advisors who could give more support to mothers in the post-natal stage.

Respondents at all levels perceive DOH Leadership for nutrition to be generally lacking, especially for allocating financial and human resources. There is a strong sentiment that DOH leadership does not consider nutrition as important as other health programs and that nutrition is forced to compete with other programs for resources.

> *"When we ask for someone to (be employed) to champion breastfeeding, it is opposed. Their focus is on HIV and TB. They don't understand the role nutrition can play".*

Standards/Norms/Guidelines/Protocols:

Of all the various guidelines and protocols, the IYCF Policy is regarded as the most useful, but many facilities lack copies. Moreover, many respondents noted that because nurses do not read policy guidelines due to high workloads and commensurate time constraints, it would be more productive to have guidelines converted into wall-chart protocols or SOPs to facilitate implementation.

Institutional Capacity for Implementation:

Training of health workers on nutrition (including breastfeeding) was inconsistent across provinces, and appears to be related to other performance related variables, such as the presence or absence of key material and human resources. Two of the four provinces had little training in nutrition in the last 2 years, while the other two reported widespread training. Some staff have not fully bought-in to the supporting exclusive breastfeeding, especially among HIV infected mothers.

Staff shortages are a problem, but among existing staff there is evidence of a lack of skills and knowledge around BF practice (proper positioning, dealing with mastitis and sore nipples, etc.) that diminishes the effectiveness of their work.

Transportation for community outreach is a common constraint that limits the ability of health workers to provide support to mothers after the birth of their babies. Insufficient supplies to help mothers with breastfeeding difficulties, such as nipple or breast shields, breast pumps for expressing milk, and feeding cups.

Information on South Africa's enforcement of the new regulations and the international code is largely anecdotal, because we were unable to specifically examine what formula manufacturers are doing at local shops or in the community. However, it appears that more could be done to better monitor the enforcement of the code, especially given that there is no apparent institutional mechanism to enforce the new regulations.

Likewise, there is no current institutional capacity to promote opportunities for breastfeeding in the workplace.

M&E systems:

M&E is a weakness all round. Data on breastfeeding practice is out of date, and no indicators exist in the DOH routine information system to effectively track the implementation of the intervention, or the achievement of the policy's goals. The current indicator on "breastfeeding at 14 weeks" is not appropriate for measuring the achievement of exclusive breastfeeding at 6 months.

Additional indicators are needed at activity, output, and outcome level to track each of the four components of the Breastfeeding intervention.

Beneficiary Engagement:

Engagement of beneficiaries is largely positive, although much more could be done to support mothers at the post-natal stage when greater support is needed to enhance their breastfeeding practices. There is good uptake of exclusive breastfeeding at birth, although it undermined by mixed feeding practices for most children less than 6 months of age.

In addition, the health system is challenged in supporting exclusive breastfeeding and resolving breastfeeding problems, especially among teen mothers who are still in school and working mothers.

Communication about the Intervention to the General Public and within Government Itself:

Messages about exclusive breastfeeding from 0-6 months appear to be well known by all respondents and beneficiaries, and nutrition education and awareness at both the facilities (DOH) and in the community are said to be culturally sensitive, and disseminated in the local language.

However, communication around breastfeeding is largely "motivational" (i.e. to "sell" breastfeeding to mothers), rather than "solution oriented" (e.g. addressing specific problems mothers have with breastfeeding. Given the social, cultural, and medical barriers to breastfeeding, communication should be much more focused on behaviour change than awareness building. In addition, there is a need for mass media communication that aims to raise awareness of the general public around breastfeeding in order to counteract social and cultural beliefs that contribute to sub-optimal breastfeeding behaviours.

8 CONCLUSIONS

The breastfeeding intervention is being prioritised within the DOH as evidenced by the newly revised regulations around the International Code, the MBFI initiative, and the widespread education and counselling given to mothers during pregnancy. Integration of breastfeeding into BANC, maternity, and post-partum health services is an implementation strength that enhances mothers' awareness of the importance and benefit of breastfeeding.

Problems arise, however, in the post-natal period, especially when women experience difficulties with breastfeeding or social/cultural pressure to mix-feed before 6 months. The health system does a good job of motivating and building awareness of the importance of breastfeeding, but does a poor job of providing support and solutions to breastfeeding problems once the baby is born. At post-natal, the quality of breastfeeding support given by health personnel falls short due to staff shortages that constrain the amount of time spent with the mother, and/or poor knowledge and skills on the part of the health worker to address breastfeeding problems. Moreover, it is widely acknowledged that after an infant is 4 months old, most mothers only use the health system when their children are sick – yet few nurses noted that they would counsel mothers on the importance of continued breastfeeding during child illness.

More effort is thus needed to build breastfeeding support to mothers after delivery. No one should come to a health facility and leave without solutions to their breastfeeding problems just because nurses are too busy or not knowledgeable. If it is not realistic to expand existing health workers' responsibilities to meet this need, then the health sector must more concertedly engage NGOs and

CBOs to relieve the facilities' workload issues and to provide mothers with the more intensive follow-on support after the baby is born.

The health sector's recent experience in expanding HIV/AIDS care and support is instructive in this regard. Recognising that health facilities could not adequately provide HIV/AIDS care and support services to HIV positive individuals and their families, the DOH and DSD undertook to fund hundreds of community-based NGOs to deliver HIV/AIDS care and support services at household and community-level. A more concerted effort for this approach could be used for breastfeeding promotion and other nutrition interventions in order to achieve the goals of the INP and the Tshwane Declaration.

Better monitoring and evaluation at activity, output, and outcome levels is critical to better implementation of this intervention.

Finally, more intensive and creative communication needs to be directed to the general public about the importance of breastfeeding. Conflicting social and cultural beliefs will continue to undermine the efforts of the health sector unless broader awareness building is disseminated throughout society. Mass media, social media, and other communications channels must be better exploited in order to reach the widest possible audience.

9 RECOMMENDATIONS

Expanded post-natal support for Breastfeeding:

1. Establish mechanisms to fund NGOs to provide post-delivery support for exclusive breastfeeding.
2. Convert policy guidelines into protocols and SOPs to ease their implementation by nurses at facility level.
3. Establish breastfeeding support groups at every health facility.

Communications

4. Create a mass media and social media communications campaign to raise awareness in the general public (especially targeted at older women and male family members) around breastfeeding. Focus messages on the importance of exclusive breastfeeding for 6 months and appropriate complementary feeding thereafter.
5. To counteract resistance by HIV infected mothers to exclusive breastfeeding, revise exclusive breastfeeding messages to include more clinical and medical reasons why it is the best option to breastfeed even if HIV infected.

Enforcing the International Code:

6. Establish a Code Help Centre to facilitate reporting of violations of the International Code
7. Use the Access to Nutrition Index (ATNI)[39] to score formula manufacturers in South Africa on their compliance with the International Code.

Monitoring and Evaluation:

8. Create new indicators for all 4 components of the Breastfeeding intervention to track activities, outputs, and outcomes. Where relevant, proposed indicators should be able to be

disaggregated by population sub-groups who are at risk of low breastfeeding rates, (i.e. mothers less than age 25; working mothers, HIV-positive mothers, etc.).

APPENDIX A TERMS OF REFERENCE

DEPARTMENT OF PERFORMANCE MONITORING AND EVALUATION

THE PRESIDENCY

Terms of Reference for Diagnostic/Implementation Evaluation of Nutrition Interventions for Children from Conception to age 5

RFP / Bid number: 12/0287

Compulsory briefing session
Date: 27 August 2012
Time: 11.00-13.00
Venue: Room 222, East Wing, Union Buildings

Please note that security procedures at the Union Buildings can take up to 30 minutes.

Bid closing date:
16.00 19 September 2012 with provision of an electronic and 6 hard copies.

1 Background information and rationale

1.1 Background to the intervention being evaluated

South Africa is in a nutrition transition which includes the coexistence of under- and over-nutrition which is evident between and within populations and across age groups. Under-nutrition has stayed roughly constant in South Africa since the early 1990s. Despite our relatively high per capita income, the country has rates of child stunting comparable to other lower-income countries in its region, and higher rates of stunting than lower-income countries in other regions. While some indicators show improvement, several conditions seem to have worsened over the past decade. In addition, children's nutritional status varies considerably among the nine provinces and possibly within each province. This has bearing on targeting and prioritization for interventions and resource allocation. Malnutrition undermines progress towards the Millennium Development Goals (MDGs) directly to those goals related to poverty, maternal health, child mortality and education, and indirectly to the remaining MDGs. Nutrition is critical for, inter alia, the improvement of maternal and child health, as underscored in the Negotiated Service Delivery Agreement

Since the democratisation of South Africa, the Government has remained consistently committed to reducing malnutrition in children and mothers. The appointment of the Nutrition Committee by the Minister of Health in August 1994 to investigate an Integrated Nutrition Strategy for South Africa was the beginning of a new chapter in nutrition in South Africa. In considering the sectoral and multi-faceted causes of malnutrition, the Committee recommended an Integrated Nutrition Strategy (INS) with three components, namely health facility-based services, community-based nutrition programmes and nutrition promotion. Instead of the fragmented and mostly food-based approaches of the past, the INS was to implement complementing strategies and follow an integrated approach to address nutrition problems. The INS was adopted in the Department of Health's White Paper for the Transformation of the Health System in South Africa (1997) and served as the basis for the Integrated Nutrition Programme (INP) for South Africa.

Priority interventions for the Integrated Nutrition Programme for children under five are as follows:

- Infant and young child feeding, which include promotion of safe infant feeding practices;
- Micronutrient malnutrition control-supplements, fortification and food diversification;

- Facility-based nutrition interventions including management of severe malnutrition;
- Growth monitoring and promotion;
- Disease-specific interventions such as nutrition interventions for children living with TB, HIV&AIDS and other debilitating conditions;
- Maternal nutrition which includes provision of micronutrients.

The beneficiaries of nutrition-related interventions and the coverage are as follows:

- Vitamin A provided to post-partum women = 760 000 (current coverage is 94%);
- Vitamin A provided to children from 6 to 59 months – 3 673 584 (current coverage 6-12 months = 90%, and 12-59 months = 41%;
- Nutritional interventions provided to people infected with TB, HIV and AIDS – 640 281;
- Malnourished children (including moderate and severely malnourished) – 134 832;
- School going children through the school nutrition programme – 7 125 273;
- Exclusive breastfeeding promoted to all children under six months old – current coverage of 25% of children from zero to six months.

The health sector is leading and harnessing the efforts to achieve Outcome 2: "A long and healthy life for all South Africans". The Strategic Plan of the National Department of Health (NDOH) provides a framework of the implementation of the 10 Point Plan of the health sector for 2009-2014, which is aimed at creating a well-functioning health system capable of producing improved health outcomes. The outcome-based approach adopted by government to accelerate the implementation of the NDOH Strategic plan guides the development of specific strategies in the sector. The four key outputs that the health sector should produce to achieve Outcome 2 are: increasing life expectancy; decreasing maternal and child mortality; combating HIV and AIDS and decreasing the burden of diseases from Tuberculosis; and strengthening health systems effectiveness.

Improving the nutritional status of the population should benefit the health system and reduce the economic burden of medical treatment and care in a number of ways. It can reduce the demand for curative treatment, and thus the number of patients, shorten the duration of hospital stays and improve recovery rates. Reduced patient loads at primary health care facilities can facilitate improved delivery of nutrition and other preventive and promotive services. Therefore, implementing proven nutrition interventions at scale will contribute in achieving Outcome 2 of the health sector.

The expected outcome of nutrition-related interventions is improving the nutritional status of the South African population, with specific reference to the most vulnerable groups, namely; pregnant women and children under the age of five. The desired outcomes are mainly:

- Reduction of stunting in children;
- Reduction of underweight in children;
- Reduction of case fatality rate due to severe acute malnutrition;
- Reduction of micronutrient deficiencies especially Vitamin A, iron, zinc and iodine;
- Promoting healthy eating amongst the children and adults to combat chronic diseases of lifestyles such as diabetes, cancers and cardiovascular diseases;
- Improving nutritional status of individuals living with chronic and other debilitating conditions.

Recent reports from government, notably the diagnostic report from the National Planning Commission also reflected the need to address the problem of child malnutrition in South Africa. The 2008 input paper from the Development Bank of Southern Africa on "Combating Malnutrition" also highlighted the need to act with speed in tackling malnutrition. The contribution of malnutrition as an underlying cause and major contributor to infant mortality in South Africa has been highlighted through various reports. This has prompted the Minister of Health to urge government to scale-up key child survival interventions such as breastfeeding to contribute in reducing infant mortality rate.

The economic costs of under-nutrition are substantial: productivity losses to individuals are estimated at more than 10 percent of lifetime earnings, and losses to gross domestic product may be as high as 2–3%. The estimated budget allocation for nutrition related interventions in provinces under the health budget vote is R320 million. Therefore the evaluation is important because of the investment that government is making on nutrition related interventions for under-five children. Identifying bottlenecks in scaling up nutrition related interventions targeting children under five will contribute better programme planning and resource allocation.

In order to understand problems of malnutrition and resources and systems needed at different levels, the "UNICEF Conceptual Framework (1990) should be used as a guide. The conceptual framework outlines in diagrammatic form the multiple causes of malnutrition operating at various levels in society. The framework also focuses on the processes, programmes and policies that need to happen at the higher level to ensure that reductions in maternal and child under-nutrition will not only be achieved in the short term, but will be maintained in the long term, will be sustainable, and will be transmitted from one generation to another. Public and private sector interventions need to influence household decision-making to influence nutrition.

The multi-sectoral nature of nutrition requires various government departments, donor agencies and the industry to work together. The following stakeholders within and outside government are critical in the successful implementation of various nutrition related interventions: Departments of Basic Education, Social Development, Agriculture, Trade and Industry, Treasury, Water Affairs, Rural Development and Land Reform, United Nations agencies, food industry, NGOs and other development partners. The Integrated Nutrition Programme became operational in 1994.

Various nutrition interventions are currently being implemented. Table 1 shows a list of the interventions to include in this evaluation.

Table 1: Nutrition interventions to be covered by this evaluation (*= high impact interventions drawn from Copenhagen Consensus of 2012 and the Lancet Series 2008)

Interventions to cover	Department responsible
Breast-feeding support*	Health
Complementary feeding*	Health
Food fortification (Vitamin A, Iron and Iodine)*	Health
Micronutrient inc Vitamin A supplementation*	Health
ORS and Zinc*	Health
Management of severe malnutrition*	Health
Management of moderate malnutrition inc targeted supplementary feeding*	Health
Deworming	Health
Growth monitoring and promotion including the use of MUAC	Health
Nutrition education and counselling (part of all of these)	Health
Improving hygiene practice (including in relation to water and sanitation) – should be in all	Health
BANC (Basic ante-natal care) – education and supplements, timing	Health
IMCI (integrated management of childhood illnesses)	Health
Household food production and preservation (home gardening)	DAFF
Access to (nutritious) food, food prices	DAFF
Food security (output 2 of outcome 7)	DRDLR/DAFF
Food access (eg food parcels, soup kitchens) (DSD)	DSD
ECD (food in ECD centres) (DSD)	DSD

The evaluation should feed into other government priorities that are geared towards the reduction of infant mortality in South Africa, especially policy initiatives such as re-engineering of Primary Health care

that are pioneered by the Department of Health. The recent review of the ECD interventions also provides an opportunity to address issues of nutrition comprehensively, focus on the most vulnerable members of the society. Malnutrition is an underlying cause of the death of children in one-third of the total of children's deaths in South Africa. Malnutrition undermines economic growth and reduces the productivity of people trying to work their way out of poverty. It is estimated that 2-3% of the national income of a country can be lost to malnutrition. Therefore it is imperative that South Africa act now to address problems of malnutrition, since we have been identified as one of the 36 countries where 90% of the world's stunted children resides.

1.2 Purpose of the evaluation

The evaluation will focus on identifying the critical system and implementation issues inhibiting or enabling people's access to nutrition-related interventions targeting children from conception to below the age of five, how these should be addressed and scaled up where appropriate.

The evaluation will provide the opportunity to re-focus interventions targeting children under five.

2 The focus of the evaluation

2.1 Evaluation questions

The key evaluation questions that this evaluation will address include:

- Do relevant **policies** exist for these interventions (those in table 1), have they been adopted by appropriate departments/levels of government, are they funded, and are they coherent across sectors?[1] Are there policy gaps?
- Does government have the appropriate policy and **regulations** to avoid inappropriate marketing of products affecting child nutrition? What are the gaps in monitoring and enforcement? How consistent is this across government? Why are some regulations not being applied effectively, or not enforced? Is there sufficient capacity in regulatory agencies? What type of partnership with industry is appropriate to promote child nutrition and development?[2]
- To what extent are nutrition interventions from different agencies (government and non-government) influencing household decisions and **reaching under 5 children** across the country (from secondary data and facility monitoring) and which are being carried by government and which by non-government agencies?
- Are **high impact interventions** being prioritised in practice? See Table 1 for a list of high impact interventions.
- What interventions are being **implemented effectively**, what aren't?
- Why are some interventions not being implemented effectively and efficiently and what is needed to strengthen, upscale and sustain them? Sub-questions include:
    - How far is nutrition **mainstreamed** into the work of relevant services which impact directly on children? These services should be defined in the inception report.
    - Are there appropriate **plans** to implement these nutrition interventions, are they included in departmental strategic plans, APPs and operational plans?
    - Is there appropriate **leadership** for nutrition at the respective levels and are they empowered to play that role?
    - Are there **relevant workers** (not necessarily professional dieticians or nutritionists) to address nutrition-related interventions?
    - Do key staff (government and non-government) at different levels have the skills to play the roles they need to play and deliver the services needed?

[1] A list will be provided
[2] Note some work has been happening in terms of food control agencies

- Do the PHC and other service facilities have the necessary equipment, guidelines, protocols and supplies to deal with nutrition in under-five children?
- Do service standards/norms exist for relevant interventions?
- Are resources allocated appropriately and sufficiently (this would draw on international evidence of cost-benefits)
- In terms of the service delivery model operating in practice, do we have appropriate systems and structures operating at community level to have effective outreach to communities (eg community-based services such as nutrition advisors, and platforms for community involvement). How extensive are these?

➢ What institutional arrangements are currently in place within and across departments and agencies (government, private sector, community actors) to address child nutrition and what is needed to improve the effectiveness of nutrition interventions?

➢ What monitoring and evaluation systems are in place and needed to monitor and improve the evidence base for and implementation of nutrition-related interventions?

2.2 Intended users and stakeholders of the evaluation

The key potential users of the evaluation results and how they may use it are shown in Table 2.

Table 2: Users and their use of the evaluation results

User	Key question	How they may use the evaluation results
Political leadership at national and provincial levels	• What do we need to do to ensure that our children are well nourished and able to use their full potential? • What institutional arrangements and M&E is needed across departments and agencies (government, private sector, community actors) to improve the effectiveness of nutrition interventions for children?	• Reprioritise resources • To strengthen intergovernmental cooperation (and with civil society) around child nutrition and development?
All departments and provinces	• What interventions are being implemented effectively, what aren't and where are the gaps? • Why are some interventions not being implemented effectively and efficiently and how can we strengthen, upscale and sustain them? • How does each department's role need to be strengthened to address this?	• Overcoming blockages and improving implementation • Reprioritise resources • Collaborate more effectively with other agencies
Development partners and NGOs	As above plus: • Where are the key gaps where our support can make a difference?	• Prioritise funding and support to programmes
Staff at facility or community level	• What skills and support do we need to ensure we can deliver services appropriately	• Recognising their shortcomings • Motivate for the support they need Allocating their time differently • Motivating and mobilising the community more appropriately
Industry	• How can industry's products and services be more appropriate in addressing child	• Refocusing products and services

User	Key question	How they may use the evaluation results
	nutrition • What type of partnership with government is appropriate to promote child nutrition?	• Appropriate partnerships established

2.3 Scope of the evaluation

Table 3 shows the issues which are to be covered, and those to be excluded.

Table 3: Scope of the nutrition evaluation

To be included	To be excluded
System issues include policy, the design of programmes, budgets, how processes work in practice	
Period from conception to age 5 Women pregnant/caring for children under 5	Exclude children >5 Women of child-bearing age who are not pregnant, and are not caring for children under 5
Link with HIV	
Main intervention programmes targeting under 5s across government	Indirect issues such as Child Support Grant. Build on existing CSG evaluation.
Underweight and overweight	
ECD	Don't cover what already covered by ECD Diagnostic Review
Public health interventions including at community level	Exclude tertiary and district hospitals except for management of severe acute malnutrition (SAM). Main focus not on clinical interventions
Budget for wider nutrition interventions beyond the Integrated Nutrition Programme, but will also look at previous INP budget for infant formula.	
Role of industry and how government engages with industry	
Relate to international experience eg in middle income countries	

3 Evaluation design

The key elements of the design include:

1. Good literature review to draw together existing research and evaluation (a set of core documents will be provided at the bidders briefing).
2. Review of existing national and provincial policies, regulations and interventions to show how these cohere or not and govern provision (bearing in mind that most nutrition action is taken at household level).
3. Some comparison with other middle-income countries, especially where data is limited. The countries should be suggested in the inception report.
4. Overview of all the interventions and the progress/not and challenges using secondary data.
5. Four provinces selected for detailed case studies to explain what is occurring and why (including those working well, those working less well). This should include KwaZulu Natal where there is

extensive community-based nutrition work happening, Western Cape, Free State/North West and Eastern Cape. These should cover urban to remote rural communities and facilities, perhaps 6 per province, covering a relatively well performing district and a poorly performing. See Annex 2.

6. Some high impact interventions selected for detailed case studies (probably breast-feeding support, targeted meal supplementation, management of severe malnutrition and possibly Vitamin A supplementation) as well as household food production and preservation (home gardening). These should show the linkages and value chain between household and the decisions made, community, facility, district, province and national level including the private sector. This should explain and illustrate implementation challenges and proposals to strengthen.
7. Thorough institutional analysis to understand how within and across departmental systems, structures, capacity, organisational culture and leadership is facilitating or limiting impacts. This will build on the landscape analysis.
8. Recommendations should take a short/medium/long term perspective.

APPENDIX B METHODOLOGY

LITERATURE REVIEW

The starting point for this evaluation was a literature review that provided the context for this implementation evaluation. The literature review examined the following relevant topics:

1. Current health and nutrition status of children under 5 and pregnant women in South Africa;
2. South Africa's policy framework on maternal and child nutrition;
3. A review of nutrition policies and interventions from 5 countries that have successfully improved their nutrition performance (Brazil, Colombia, Malawi, Mozambique, and Malaysia). These countries were selected by the Evaluation Steering Committee as comparisons to South Africa based on one of the following two reasons:
    - the country has similar economic or infrastructure characteristics to South Africa but much better nutrition performance at a national level (i.e. Brazil, Colombia, and Malaysia), or
    - the country is geographically proximate to South Africa and thus has similar environmental and cultural characteristics, but again better nutrition performance (i.e. Malawi and Mozambique);
4. An analysis of implementation issues present in the literature.

SAMPLING

Before we began fieldwork, the Evaluation Steering Committee identified the geographic areas where fieldwork was to be carried out and the important subgroups or categories of people to be sampled. The four stages involved are further described below.

Stage 1: Selection of Provinces

Aside from data collection at national level, the Evaluation Steering Committee identified 4 provinces (purposefully-selected) for the reasons indicated below:

JUSTIFICATION FOR THE PROVINCES SAMPLED

Province	Justification
KwaZulu-Natal	Its emphasis on community nutrition
Western Cape	The general perception that nutrition and health programmes are well implemented in the Western Cape
Free State	The general perception that nutrition and health programmes are well implemented in the Free State
Eastern Cape	Its unique development profile and its challenges in implementing government programmes

Stage 2: Selection of Districts

In each province, 2 districts were purposefully selected based on their levels of performance (i.e. high performing and low performing). We obtained recommendations from provincial nutrition focal persons regarding the names of high-performing districts in their province. Selection of the poor-performing districts were identified with the Evaluation Steering Committee using the following criteria:

- NDOH score for district's performance in child health indicators
- NDOH pilot districts for implementing the NHI (these tend to be districts with vulnerable population and have a high burden of disease, and have demonstrated poor performance in 27 socio-economic, health service and financial and resource management indicators).
- Rural Development scores for district performance
- Agriculture scores for district performance
- DSD district performance scores

Two of the poor-performing districts chosen with the Evaluation Steering Committee (in FS and WC) were revised, with the final sample of districts being presented in the table below.

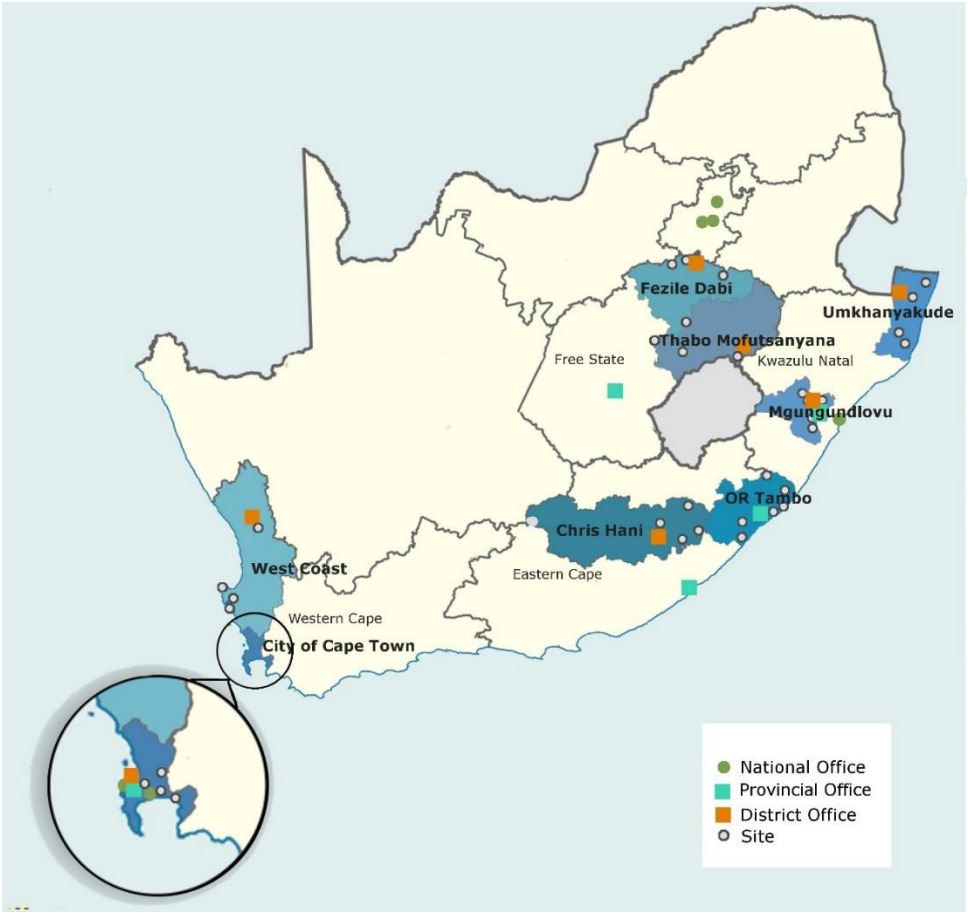
DISTRICTS INCLUDED IN THE SAMPLE

PROVINCE	HIGH PERFORMING DISTRICTS		POOR PERFORMING DISTRICTS	
	District Name	Justification	District Name	Justification
Eastern Cape	Chris Hani	Recommendation from the EC nutrition focal person.	OR Tambo (Umtata)	NHI pilot site Poor Child Health indicator score Poor Rural Development indicator Score
KZN	Umgungundlovu	Recommendation from the KZN nutrition focal person.	Umkhanyakude (Mkuze / Jozini)	Poor Child Health indicator score Poor Rural Development indicator Score High poverty levels based on DSD indicators
Free State	Thabo Mofutsanyane	Recommendation from FS nutrition focal person	Fezile Dabi	Recommendation from Nutrition Manager in FS province
Western Cape	West Coast	Recommendation from WC nutrition focal person.	City of Cape Town	Recommendation from Nutrition Manager in WC province

Stage 3: Selection of Facilities/Organisations

In each district, Khulisa randomly selected 4 health facilities according to their geographic status (urban/rural), and purposefully selected 4 NGOs that work in food/nutrition. This resulted in a total sample of 32 health facilities and 16 NGOs as across the 4 provinces.

FIELDWORK LOCATIONS



Stage 4: Selection of Individual Respondents

Key informant respondents were purposefully sampled based on a list of stakeholders provided by the Evaluation Steering Committee. The sampling strategy for beneficiaries was based on a convenience sample obtained during site visits to health facilities and NGOs. The method for data collection in each group in the sample is indicated in brackets in the box below.

Proposed Respondents (and method of data collection)

1) **National Level Respondents** *(in-depth interviews)*
   - National DOH nutrition managers
   - National DSD managers
   - National Rural Development food/nutrition managers
   - National Agriculture food security managers
   - National ECD managers
   - Bilateral Donors: USAID, CDC
   - Multi-lateral Donors: UNICEF, WHO
   - Relevant local and international health/development organizations:
   - Relevant food industries
2) **Provincial Level Respondents in WC, EC, FS, and KZN** *(in-depth interviews)*
   - Provincial DOH nutrition managers
   - Provincial DSD nutrition managers

- Provincial Rural Development food/nutrition managers
- Provincial Agriculture food security managers

3) District Level Respondents *(in-depth interviews or focus group discussions)*

- District DOH nutrition managers
- District DSD nutrition managers
- District Rural Development food/nutrition managers
- District Agriculture food security managers

4) Health Facility Respondents *(in-depth interviews or focus group discussions)*

- MCH nurse or nursing assistant
- Counsellors for pregnant women and/or mothers of young children
- Community health workers attached to health facilities

5) NGO Respondents *(in-depth interviews or focus group discussions)*

- Programme or Site Manager
- Community workers

6) Beneficiary Respondents *(focus group discussions)*

- Pregnant women and mothers of children under 5 years present at health facilities
- Beneficiary participants in NGO programmes

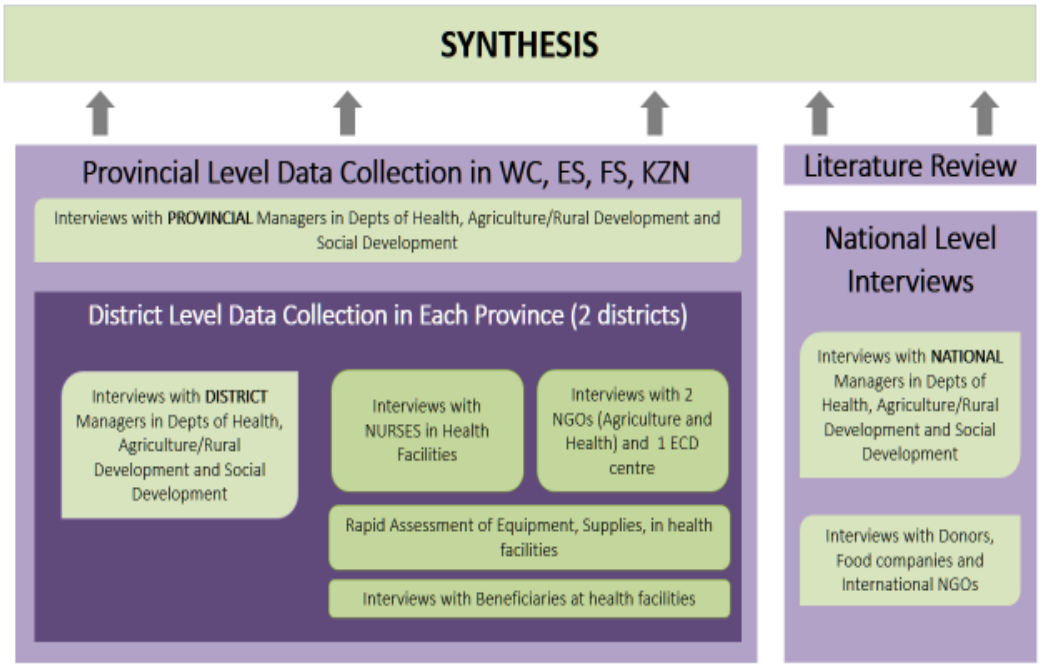
DATA COLLECTION METHODS

Data collection methods used in the evaluation are as follows:

1. Semi-structured Key Informant Interviews
2. Focus Groups with beneficiaries
3. Rapid Performance Assessments of health facilities
4. Assessment of Health Worker Knowledge around nutrition

The figure below summarises the data collection components of the evaluation.

Summary of Data Collection Components of the Evaluation



The table below presents the data collection methods used, the target respondents for each method, as well as the content explored.

Data Collection Methods and Target Respondents by Content

Method	Target Respondents	Content explored
Key informant interviews	Relevant Government managers at national, provincial, and district levels	• Perceptions on current needs and practice around nutrition • Moderating factors (i.e. policy content and fit, organisational context and culture, commitment, capacity, facilitation processes that affect participant responsiveness, and communication) • Institutional arrangements • M&E for food/nutrition • Funding levels
	Food industry representatives	
	Bilateral and multilateral donors and international health/development NGOs	
	Health facility staff or managers	
	Representatives from CBOS/NGOS involved in food/nutrition programmes	
	Programme managers at district level, groups of health staff at facility level	
	Representatives from community-based projects and services (ECD, agriculture, health)	
Focus Group Discussions	Beneficiaries	• Experiences with food and nutrition programmes and services • Satisfaction with services • Need for food/nutrition support

Method	Target Respondents	Content explored
Rapid Performance Assessment	Health Facilities	Review of relevant infrastructure, equipment, and supplies for delivering nutrition interventions
Assessment of Health worker Knowledge	Nurses, counsellors, or others providing nutrition services	Knowledge of diagnostic steps and counselling around breastfeeding difficulties, growth faltering, and knowledge of the benefits of micronutrient supplementation

PLANNED VS. ACTUAL DATA COLLECTION

The fieldwork was conducted in 100 of the intended 104 intended locations (96%). The missing locations include: one national level interview (not conducted because of difficulties in scheduling or refusals), two district level offices (not interviewed in the Western Cape (DOA for West Coast district and DOH for City of Cape Town Metro)), and one health facility in the Free State.

As shown in in the table below, 143 interviews and Focus Group Discussions (FGDs) were conducted across these 100 locations. Half of these were held at Government offices or health facilities, 30% were Beneficiary FGDs, and the remaining 20% were with NGOs or other (donor representatives, international agencies, and private companies). Many interviews were conducted with more than 1 respondent, resulting in the total number of respondents being more than 400 people.

Two additional assessments were conducted at health facilities: (i) a rapid assessment of relevant equipment and supplies for delivery of nutrition interventions, and (ii) an assessment of health worker's knowledge around nutrition interventions.

FIELDWORK PLANNED AND ACTUAL

Data Collection Method and Stakeholders Group	No. of Interviews / FGDs			Total No. Persons interviewed
	Planned	Actual	%	
Individual or Group Interviews				
National Government Managers	4	5	125%	7
Representatives of International NGOs	4	7	175%	8
Donors	3	4	133%	5
Private Food Companies	4	4	100%	8
Provincial Government Managers	12	15	125%	22
District Government Managers	24	21	88%	37
Health Facilities	32	31	97%	61
Local NGO	8	8	100%	18
ECD Centre	4	5	125%	12
Focus Group Discussions				
Beneficiaries FGDs at health services and community projects	48	40	83%	267
TOTAL	**143**	**140**	**98%**	**445**

Other Assessments	Planned	Actual	%	No. Persons Reached

Health Facilities Rapid Assessments	40	36	90%	--
Health Worker's Assessment of Nutrition Knowledge	76	132	174%	136

A breakdown of the number of respondents per province can be seen in in the table below.

ACTUAL NO. INTERVIEWS AND FGDS CONDUCTED BY PROVINCE

	Western Cape		Free State		Kwa-Zulu Natal		Eastern Cape		National Level		Total	
	No. Interviews / FGDs	No. Resp.	No. Interviews / FGDs	No. Resp.	No. Interviews / FGDs	No. Resp.	No. Interviews / FGDs	No. Resp.	No. Interviews / FGDs	No. Resp.	No. Interviews / FGDs	No. Resp.
DOH Mgmt	2	2	4	5	3	4	3	7	1	2	13	20
DSD Mgmt	2	4	5	6	3	7	4	6	2	3	16	26
Ag Mgmt	1	1	3	5	3	7	3	5	2	2	12	20
Donors, companies	--	--	--	--	--	--	--	--	14	21	14	21
NGOs (local) /ECD	1	1	4	7	4	15	4	7	--	--	13	30
Health Facilities	8	9	7	7	8	31	8	14	--	--	31	61
Beneficiary FGDs	7	21	10	69	11	106	12	71	--	--	40	267
TOTAL	**21**	**38**	**33**	**99**	**32**	**170**	**34**	**110**	**19**	**28**	**139**	**445**

NB: *No. Resp* = Number of respondents across the interviews and focus group discussions. Because interviews were often conducted with more than one person, the number of respondents is often greater than the number of interviews or FDGs held.

DATA RECORDING AND CAPTURING

During each interview or assessment, the researcher took extensive notes on the instruments specific to the interview. An interview guide provided researchers with further guidance on when to probe for answers and when not to. The notes were then captured in Excel for data analysis and then coded according to themes.

DATA ANALYSIS

Quantitative data collected in the KIIs, FGDs, Health Facilities Rapid Assessments, and Health Worker's Assessment of Nutrition Knowledge were analysed using descriptive statistics.

Qualitative data collected under the KIIs and FGDs were analysed using content analysis, from the notes that had been transcribed into Excel. The following criteria were utilised to determine the 'reliability and validity' of the data.

1. Truth value/Credibility: Truth value describes the level of confidence the researcher has with the truth of the findings based on: research design, informants and context.
2. Consistency/Dependability: Due to the non-experimental and complex nature of qualitative research, variability is expected and consistency is explained as dependability. Dependability requires that variability is tracked and explained and informant's range of experience from typical to atypical experience explained.
3. Neutrality: Neutrality in qualitative research involves neutrality in relation to data rather than the investigator.

Once the qualitative notes were checked for reliability and validity, these were coded for themes. These themes were tabulated and reported on according to the KII and FGD questions.

REPORTS PRODUCED

Case Study reports were prepared for each of the four provinces where fieldwork took place, as well as for each of the four priority interventions. In all, 11 reports for dissemination prepared for this evaluation as listed below:

1. Literature Review
2. Breastfeeding Case Study
3. Targeted Supplementary Feeding Case Study
4. Home Gardens Case Study
5. Food Access Case Study
6. KwaZulu-Natal Provincial Case Study
7. Eastern Cape Provincial Case Study
8. Free State Provincial Case Study
9. Western Cape Provincial Case Study
10. Final Evaluation Report
11. Summary of Final Evaluation Report (1-5-25)

LIMITATIONS OF THE EVALUATION

By their nature, qualitative evaluations of policies and programme implementation allow examination of the broader context, rather than specific measurements of compliance to policy elements or programmatic guidelines. This evaluation's extremely broad scope (18 interventions, 17 research questions, and investigation of 6 moderating factors) resulted in very lengthy interviews with respondents who often had time constraints. Consequently, many respondents gave only cursory information around the issues that we sought to explore more deeply.

Because nutrition interventions for pregnant women and children under 5 in the health sector far outweigh the number of nutrition interventions in the social development and agriculture sectors, the evaluation's sampling framework is biased toward respondents from health. In addition, at provincial, district, and local levels, most respondents were able to speak knowledgeably about nutrition interventions implemented by their specific government department, but few were able to comment on the adequacy of implementation for interventions outside their sector. Consequently, data collected from social development and agriculture is sparse compared to that collected from health, making generalisations on implementation in agriculture and social development more difficult.

Data collection in the WC was significantly delayed due to the need to secure ethics clearance from the province before the commencement of field work. This delay led to time constraints on the part of the researcher which in turn resulted in less complete data for the WC compared to that for the other 3 provinces.

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