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Department of Social Development
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and Evaluation

FINAL EVALUATION REPORT

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

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Khulisa Management Services (Pty) Ltd

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 was responsible for overseeing the delivery of the evaluation, commented and approved the reports.

Submitted by:
Mary Pat Selvaggio
Director
Khulisa Management Services (Pty) Ltd
26 7th Avenue, Parktown North
Johannesburg, 2193, South Africa
Tel: +27 11 447 6464, Ext 3215
Fax: +27 11 447 6468
Email: mpselvaggio@khulisa.com
www.khulisa.com

Submitted to:
Ian Goldman
DDG: Evaluation and Research
The Presidency
Dept of Performance Monitoring and Evaluation
Private Bag X944
Pretoria, 0001, South Africa
Tel: +27 12 308 1918
Fax: +27 86 686 4455
Email: ian@po.gov.za

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ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
APP	Annual Performance Plan
ART	Antiretroviral Therapy
BANC	Basic Antenatal Care
BF	Breast Feeding
CBO	Community Based Organisation
CCG	Community Care Givers
CCT	Conditional Cash Transfers
CHC	Community Health Centre
CHW	Community Health Worker
CONSEA	Brazilian Food and Nutritional Security Council
CPD	Continuous Professional Development
CSIR	Council for Scientific and Industrial Research
DAFF	Department of Agriculture Forestry and Fisheries
DHIS	District Health Information System
DHS	Demographic Health Survey
DIS	District Information System
DOA	Department of Agriculture (generic)
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
DSD-SP	EC Department of Social Development and Special Programmes
DST	Department of Science and Technology
EBF	Exclusive Breastfeeding
EC	Eastern Cape
ECD	Early Childhood Development
EC-DRDAR	Eastern Cape Department of Rural Development and Agrarian Reform
FBSA	Food Bank of South Africa
FGD	Focus Group Discussions
FHI	Family Health International
FS	Free State
FS-DARD	Free State Department of Agriculture and Rural Development

GDP	Gross Domestic Product
GM	Growth Monitoring
GMP	Growth Monitoring and Prevention
HIV	Human Immunodeficiency Virus.
HFPP	Household Food Production and Preservation
HR	Human Resources
IEC	Information, Education, and Communication
IFSS	Integrated Food Security Strategy
IMCI	Integrated Management of Childhood Illnesses
INP	Integrated Nutrition Programme
INS	Integrated Nutrition Strategy
IYCF	Infant and Young Child Feeding
KZN	KwaZulu-Natal
LMS	Living Standards Measurement
M&E	Monitoring & Evaluation
MBFI	Mother Baby Friendly Initiative
MCH	Maternal and Child Health
MDG	Millennium Development Goals
MEC	Member of the Executive Committee
MOH	Ministry of Health
MUAC	Mid-Upper Arm Circumference
NGO	Non-Government Organisation
ORS	Oral Rehydration Solution
OSS	Operation Sukuma Sakhe (KZN initiative)
PATH	Program for Appropriate Technology in Health
PHC	Primary Health Care
PIAPS	Provincial Integrated Anti-Poverty Strategy
PMTCT	Prevention of Mother to Child Transmission
SANHANES	South African National Health and Nutrition Examination Survey
SASA	South African Sugar Association
SASSA	South African Social Security Agency
SOP	Standard Operation Procedure
TB	Tuberculosis
TOR	Terms of Reference
TSF	Targeted Supplementary Feeding
TV	Television

U5	Under 5 (years of age)
UN	United Nations
UNICEF	United Nations International Children's Emergency Fund
WC	Western Cape
WC-DOA	Western Cape Department of Agriculture
WHA	World Health Assembly
WHO	World Health Organisation
ZAR	South African Rands
Zn	Zinc

GLOSSARY

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
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 addition 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.
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 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.

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.

EXECUTIVE SUMMARY

1 INTRODUCTION

A diagnostic and implementation evaluation of Government Nutrition programmes was undertaken as part of the National Evaluation Plan for 2012/2013. The focus of the evaluation was on the sufficiency of national and provincial policy, leadership and resource allocation; on district management and oversight; and local level services delivery. The conceptual framework comprised an examination of 6 factors that moderate the implementation of nutrition programmes.

1.1 Background: 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 emphasising collaboration between Government Departments (inter-sectoral collaboration of line departments) to promote joint action for addressing nutrition problems. This multi-sectoral approach was intended to address the previously neglected underlying determinants of malnutrition. , despite this effort, nutrition problems such as stunting have persisted. Furthermore, lack of progress on the nutrition front has contributed to a stagnation of the child mortality and morbidity resulting in South Africa lagging behind in the push towards achieving the Millennium Goals by 2015.

1.2 Objectives of the Evaluation: The purpose of the evaluation was to assess the implementation of 18 nutrition interventions being delivered by the Departments of Health, Social Development, and Agriculture and to determine the enabling and inhibiting factors for implementation.

1.3 Approach: The evaluation of the implementation of the INP and its 18 nutrition interventions were viewed through the lens of the six moderating factors: Fit of policies and strategies to context; culture and context; implementation strategies; participant responsiveness; capacity to implement; and communication.

1.4 Methodology: The starting point was a literature review that provided the context for this implementation evaluation. The literature review compared the nutrition response of South Africa with that of 5 countries that have successfully improved their nutrition performance (Brazil, Colombia, Malawi, Mozambique, and Malaysia). These comparison countries were selected by the Evaluation Steering Committee. Notable characteristics in the comparison countries' nutrition responses were: coordination; common operational plans across all relevant sectors; focus on quality of food consumed and dietary diversity; conditional cash transfers; and common metrics for tracking food and nutrition interventions across all sectors.

Four provinces were selected for fieldwork -- KwaZulu-Natal, Western Cape, Free State, and Eastern Cape. In each province, 2 districts were purposefully selected and in each district Khulisa randomly selected 4 health facilities. In each province, 4 NGOs working in food/nutrition were included in the sample. This resulted in a total sample of 32 health facilities and 16 NGOs as across the 4 provinces.

A multi-method approach was undertaken to collect a range of qualitative and quantitative data on the conceptual framework's 6 moderating factors. Data was collected using: Semi-structured Key Informant Interviews with Government and NGO managers; Focus Groups with beneficiaries; Rapid Performance Assessments of health facilities; and Assessment of Health

Worker Knowledge around nutrition. Qualitative data was analysed using content analysis from notes transcribed into Excel. Descriptive statistics were used to analyse quantitative data.

1.5 Limitations of the Evaluation: Most of the 18 nutrition interventions are in the health sector the evaluation's sampling framework and results are biased toward feedback about health interventions. In addition, 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.

1.6 Reports Produced: In addition to the final report and Literature Review, 8 case studies were prepared for this evaluation: 4 Provincial Case Studies and 4 Case Studies on the following interventions: Breastfeeding Support, Targeted Supplementary Feeding, Food Access, and Household Food Production and Preservation.

2 NUTRITION SITUATION IN SOUTH AFRICA

2.1 Trends in Nutritional Status: Compared to 5 countries that have successfully improved their nutrition performance (Brazil, Colombia, Malawi, Mozambique, and Malaysia), South Africa has shown very little improvement between 1999 and 2012 in reducing underweight or wasting. In addition, South Africa's double burden of overweight and underweight is much higher than the comparison countries. According to the latest SANHANES data (2012), 21% of South African children under 5 are too short (stunted) for their age, placing them at risk for compromised cognitive development and chronic diseases later in life.

2.2 South Africa's Response – Policies and Strategies: Generally, South Africa has a good mix of health and nutrition policies which should address the immediate, basic, and underlying factors associated with poor nutrition. The three key government departments implementing nutrition interventions across the four provinces are the Departments of Health (DoH), Social Development (and its sister agency the South African Social Security Agency (SASSA)) and Agriculture (DAFF). Most policies and strategies from DoH, DSD, along with the National Development Plan 2030 have language that demonstrates some sensitivity to the nutrition needs of pregnant women and young children. However, policies from agriculture do not, as its Food Security Strategy places emphasis on food production and not nutrition or consumption of nutritious foods.

2.3 South Africa's Response compared to the other countries: Of the 6 countries, only South Africa lacks a common operational plan (and budget) for consolidating nutrition activities with targets across sectors and at all levels of implementation. There is also no coordinating body above line ministries which can hold them accountable in terms of their contribution to nutrition.

2.4 The Role of the Food Industry: Most companies that have nutrition linkages with Government are large-scale manufacturers or wholesalers. Smaller privately-owned food companies generally do not have relationships with Government. Several large food companies donate food for social development activities that parallel DSD's efforts, such as food parcels, soup kitchens and ECD centres. Food Bank South Africa (FBSA), the main coordinator of food banks in South Africa, has partnered with DSD to organise and establish food banks in communities with the highest concentration of food insecurity.

South Africa's recently-enacted (2012) regulations around the International Code for Marketing of Breast Milk Substitutes has limited the engagement of health professionals with infant formula companies. Nevertheless, in the EC, formula companies organise Continuous Professional Development (CPD) activities for dieticians and nutritionists and sponsor nutrition training for DSD social workers. While respondents were less forthcoming about the extent to which food companies sponsor CPD training or interact with government departments, several examples

were shared of instances where food companies have provided/ sponsored training to health personnel.

In the agriculture sector, the interaction between agriculture industry/associations and the government includes information sharing, providing technical assistance and training to farmers, sponsorship of events, and donation of farming/ rain harvesting equipment.

3 FINDINGS

3.1 Fit of Policies and Strategies: The INP is the main policy vehicle for achieving synergies in nutrition investments across the health, social welfare, and agriculture sectors; however, there are no readily-available guidelines governing the INP which appears to exist mainly as an approach rather than a formalised programme. Each department's interventions that contribute to INP are not formally coordinated. Nor do they all demonstrate "nutrition" sensitivity or sensitivity to the first 1000 days of a child's life. There are no performance reviews of the INP, although performance reviews of specific interventions reportedly are carried out in individual directorates.

Most health sector policies/strategies relating to pregnant women and children under 5 are nutrition sensitive, although they mainly focus on under-nutrition and lack attention to South Africa's growing obesity issue. In contrast, policies/strategies emanating from the social development and agriculture sectors are largely focused on food quantity with little, if any, attention given to dietary quality or diversity and the growing problem of obesity; the underlying premise of these policies is that people don't have enough to eat and they mainly target poor, vulnerable households, with no further targeting of pregnant women or children under 5, except for the policies around ECD food subsidies.

The bulk of the 18 nutrition interventions fall under the category of Health Access interventions. The evidence from this evaluation points to the fact that more "clinical" nutrition services are far better mainstreamed and prioritised than behavioural change interventions. [A m*ainstreamed* intervention was defined as one which was part and parcel of normal services delivery while a *prioritised* intervention was defined as an intervention which was actually delivered to all or most eligible patients/clients.] The majority of nutrition interventions in this category have specific guidelines and protocols resulting in an overload of information for health workers implementing nutrition at facility level.

The policies/strategies around Food Security fall under the Food Production and Availability category. These are mainly focused on enhancing production at smallholder and household levels in impoverished geographic areas; however, they are not focused on enhancing dietary diversity, nor are they targeted specifically to the most nutritionally-vulnerable households or communities.

Food Fortification, food parcels, soup kitchens, ECD food support, and low-cost popular restaurants are the interventions under the Access to Nutritious Food category. While ECD and Food Fortification are governed by guidelines and legislation respectively, similar documentation governing the implementation of the other interventions was not readily available.

South Africa's various social grants are a form of Income Access and Social Expenditure which address the poverty dimensions of malnutrition. Although this intervention was not a focus this evaluation, respondents noted that social grants are not nutritionally targeted and lack linkages to nutrition and health monitoring.

3.2 Resource Allocation: Financial resources are allocated for most of the 18 nutrition interventions, but analysis is compromised by the inability to disaggregate the value of staff time and material inputs apart from larger health, agriculture, and social development budgets and staff complements. This lack of disaggregation underestimates the resources allocated to

nutrition, particularly in the health sector. National Treasury is about to undertake an expenditure review on nutrition which will help to answer this question.

Across all sectors in the 4 provinces, respondents reported staff shortages that they believe inhibit implementation of nutrition interventions. In the health sector, a shortage of professionally-trained nutritionists and dieticians has resulted in an over-dependence on nurses to implement the DoH's nutrition interventions as part of normal PHC services. In the Agricultural and Social Development sectors, nutrition services are meant to be provided by food security and social work staff, respectively, but these cadres lack relevant nutrition training.

3.3 Implementation Models:

3.3.1 Delivery Channels: We identified 6 main delivery channels (i) Facility-based delivery, (ii) Community-based delivery by government personnel, (iii) Community-based delivery by NGOs/CBOs, (iv) Peer Support Groups, (v) Commercial (Food Industry), and (vi) Linkages with other government services. In general, more "clinical" nutrition interventions that are provided during episodes of illness or pregnancy are extensively delivered in health facilities (e.g. Management of Malnutrition, BANC, IMCI, etc.). In contrast, when health interventions involve education/ counselling/support to otherwise healthy clients, there is evidence of less intensive delivery at health facilities. There is limited community-based delivery of nutrition interventions by CHWs (although this is expected to change given PHC re-engineering). There is also limited linkage and referrals between different government departments, and minimal engagement with NGOs and CBOs. A notable exception is DSD support to ECD centres as its main channel for reaching children under 5 years of age.

3.3.2 Strategic Coordination: South Africa has no coordination structure that exists above the implementing ministries similar to that seen in other successful countries. National level strategic coordination of nutrition is based on the participation of government departments in a forum usually led by DAFF. At provincial level, coordinating mechanisms exist in EC, FS, and WC, but these do not appear to give nutrition the importance accorded by the KZN model, where OSS represents a strong and effective coordinating framework at the level of the Premier in which nutrition features prominently.

3.4 Organizational Context

3.4.1 Leadership Arrangements: DoH leadership and management structure for nutrition tends to be more distinct and separate at higher levels of government and gets blurred at the lower levels. At the national level, there is a separate directorate for nutrition, a structure that is not commonly replicated at the provincial and district levels. Across the four provinces there is no uniformity in where nutrition is placed. In KZN, nutrition "sits" at the highest-level in the Premier's office and is a directorate in the KZN Department of Health. This raises the profile of nutrition in the Province and facilitates implementation of the various interventions. In contrast, in the other 3 provinces, there is a lack of strong nutrition leadership at the provincial and district levels. This has resulted in nutrition not being considered as important as other health programmes by DoH leadership at all levels (particularly in EC and FS) and has led to nutrition interventions getting lost or watered down and constantly competing with clinical interventions for scarce resources.

DSD's Food for all Campaign was cited as evidence for its strong support for ensuring access to food by the most vulnerable populations. DSD has no distinct structures overseeing the implementation of nutrition interventions, but rather addresses food access through different directorates and SASSA. DAFF's nutrition interventions fall under its food security programme, but in some provinces frequent and abrupt changes in provincial food security leadership have led to implementation issues.

3.4.2 Monitoring and Evaluation: M&E of the 18 nutrition interventions are department and programme specific. There is no integrated M&E system for the INP that consolidates the measurements of nutrition implementation from different sectors. Little M&E data appears to be

disaggregated to track the number of children under 5 reached with nutrition interventions as well as the effects of these interventions on nutritional status. Even where indicators exist, there are data quality concerns. Finally, many nutrition-related indicators collected at provincial level are not reported to national level, and this limits the national departments' ability to guide and support implementation from a policy or strategic perspective.

3.4.3 Availability and Adequacy of Infrastructure, Materials, and Supplies in Health Facilities: Most health facilities have the necessary equipment, guidelines, and protocols to address nutrition in under-five children. However, frequent stock outs of key commodities, a general shortage of IEC materials and lack of adequate infrastructure are challenges faced by many facilities.

3.5 Institutional Capacity

3.5.1 Sufficiency of Skills and Training: In the health sector, there's evidence of a lack of skills and knowledge among existing staff at the service delivery level around key nutrition interventions, except in KZN where nurses received the most training and demonstrated the most knowledge around nutrition. Frequent staff attrition or rotation is an additional barrier to retention of skills and knowledge. Furthermore, respondents noted that supervisors need more nutrition training to effectively support implementation at the health facilities.

In agriculture, there are varying degrees of knowledge and skills in the different provinces, and this appears to be related to nutrition training. In DSD, many respondents reported inadequate training of those currently delivering and monitoring Food Access interventions and ECD support.

3.5.2 Sufficiency of Service Standards and Norms: Many of the 18 key nutrition interventions covered in this evaluation have standards and norms governing their implementation. Provincial adaptation of national guidelines and/or protocols varies by province. However, the degree of adaptation is generally not significant, with the key elements retained.

3.5.3 Sufficiency of Planning and Management for Implementation: Planning for nutrition is part and parcel of each department's Annual Performance Plan (APP), although the specific targets and budgets for nutrition are not always evident, and the extent to which nutrition is considered in the plan and budget varies. Planning for nutrition is inconsistent across departments and the four provinces. In the health sector, not all provincial DoH APPs contain targets for nutrition services. In DSD and DAFF, APPs for these two sectors contain targets for food access and home food production interventions. However, these are not based on nutrition measures (e.g. stunted children); rather proxy measures (poverty) are used to determine who is eligible. In addition there is a lack of attention given to the quality of food disbursed or grown.

3.5.4 Sufficiency of Linkages, Referrals and Partnerships: Many DoH nutrition interventions are fairly well integrated into existing clinical services; however, the integration of nutrition-related counseling, education, and support services is lacking. This is partially attributed to the high workloads of health care workers, but is also to health care workers lack of understanding of the importance of nutrition counseling and education in increasing the uptake of other nutrition-related health services.

At local level, linkages and referrals between departments are ad hoc or weak, with the exception of KZN where the province's OSS mechanism enables an integrated approach to case management at local level through regular communication and shared information. In the absence of an established structure like OSS, social workers, health workers, and food security personnel do not have a mechanism to coordinate their responses to specific cases. Lastly, there are limited partnerships with NGOs and CBOs across all sectors, except for DSD's food access interventions which are largely implemented by NGOs and CBOs.

3.6 Beneficiary Responsiveness: Beneficiaries are generally responsive to government interventions around nutrition, particularly DoH health services and DSD Food Access

interventions, and they show no resistance to utilising these services. However, beneficiaries are less responsive to household food production and breastfeeding promotion, reportedly because of cultural and/or social values that inhibit uptake. Scaling up these interventions will require massive investments in persuasive communications to overcome resistance and change behaviours in the general public. Beneficiaries' economic constraints (particularly in paying for transport to health facilities) was noted as generally inhibiting the uptake of facility-based nutrition interventions in rural areas.

3.7 Communication:

3.7.1 Internal Communication: The most common channels of internal communication in government are dissemination of documentation (policies, strategies, guidelines, updates/circulars), and in-service training and supervisory visits. Most respondents at provincial, district and local-level view these internal communication channels as sufficient to assist in implementing the various interventions. In contrast, respondents from national level cited poor internal communication as resulting in an information gap between national policies (especially new or revised policies/initiatives) and the services actually provided at local level. Feedback from lower levels is received both formally (via the M&E system) and through supervisory visits and training, but many respondents expressed their dissatisfaction with the extent of feedback.

3.7.2. External Communication: A wide range of communication channels are used to promote nutrition interventions to the general public, and by and large communication is said to be credible, culturally sensitive, and disseminated in local languages, regardless of the channel. However, the relatively infrequent use of mass media for promoting nutrition limits the government's ability to "focus and customise messages to targeted beneficiaries", particularly in light of intensive marketing by food companies to the general public.

3.8 Responses to the 17 Evaluation Questions: The 17 evaluation questions and their responses are briefly presented below.

1) Relevant, coherent, funded policies across sectors:

   While policies exist for most of the 18 nutrition interventions, there is a lack of coherence across sectors. Except for DoH and DSD's ECD policies, there is no specific targeting of children under 5 and pregnant women.

2) Inappropriate marketing of food products to children:

   New regulations governing the inappropriate marketing of breast milk substitutes issued in 2012 are comprehensive and appropriate for enforcing the International Code. However, the regulations only go into effect in 2014. In the meantime, there is self-policing by health personnel. No policies or regulations currently exist which govern the inappropriate marketing of unhealthy (obesogenic) food to children.

3) Interventions that influence household decisions and behaviour:

   The interventions that have the strongest uptake and those that provide food (parcels, soup kitchens, and ECD centres) and those that are targeted to the pregnant women (BANC) and the sick child (management of malnutrition). Interventions that are focused on routine health services or behaviour change (e.g. micronutrient supplementation, growth monitoring, and nutrition education) along with home gardening and food preservation have lower uptake.

4) Prioritisation of high impact interventions:

   Seven of the 18 nutrition interventions are classified as high impact and they are implemented by the DoH. Prioritised is defined as an intervention that is delivered to all or most eligible beneficiaries as evidenced by coverage rates or other measures. Six of the seven are prioritised while 1 (complementary feeding) is not.

5) Interventions being implemented effectively or not:

   The 18 nutrition interventions were scored against 9 implementation factors. Half of the interventions – mostly implemented clinical interventions delivered by DoH as well as ECD food support – were scored positively. The remaining 9 interventions -- mainly DoH behaviour change interventions and food access and agriculture interventions – scored lower.

6) Reasons for successful or poor implementation:

   Enabling factors that contribute to strong implementation include: nutrition sensitivity, clear targets for pregnant women and children under 5, and standard operating procedures/ guidelines. Impeding factors that weaken implementation include: limited linkages with other government departments, limited partnerships with NGOs, insufficient HR (numbers and skills) and inadequate communications around the interventions which leads to poor participant responsiveness/uptake.

7) Mainstreaming of nutrition into child focused services:

   In the health sector, nutrition is better mainstreamed when it is part and parcel of more "clinical" health services; but when nutrition support, education, or counseling is required for behaviour change, then the intervention is not mainstreamed. In the social development sector, DSD's food access interventions are inadequately mainstreamed due to the lack of guidelines and monitoring systems that address the quality of food provided, and the lack of specific targeting of young children who are most vulnerable to malnutrition. In the agriculture sector, there is no nutrition sensitivity in the design of the programme or the targeting of households with young children.

8) Planning for Nutrition:

   Planning for nutrition is part and parcel of each department's Annual Performance Plan (APP), although the specific targets and budgets for nutrition are not always evident, and planning is inconsistent across departments. Nutrition targets and budgets are more explicit in the DoH plans than in DSD or DAFF plans.

9) Leadership for Nutrition:

   Leadership for nutrition is specific to each line ministry, but is more visible for DoH than for the other government departments at all levels. At provincial level, variance in DoH leadership is related in part to "where" nutrition sits in the organisational structure. When nutrition is positioned at the sub-directorate level or lower, there is a sense that nutrition is not given the same importance as other heath programmes.

   DSD and DAFF leadership and vision is more attentive to the quantity of food available to the population rather than the dietary quality and diversity.

   There is no explicit vision or leadership for nutrition at a level above line ministries (except for KZN) and this may partially explain the results seen for poor inter-departmental coordination of nutrition overall.

10) Human Resources (numbers):

    All sectors are affected by staff shortages and the lack of nutrition-trained personnel. While many believe that more nutrition professionals should be hired to fill this need, the example of KZN suggests emphasising the use of community-based workers -- either government employees like CHWs or contracted NGOs workers -- to provide these services on behalf of DoH, DSD, and DOA with appropriate supervision.

11) Human Resources (skills):

Across all sectors, personnel charged with delivering nutrition interventions generally lack sufficient knowledge and skills, and this was consistent with whether or not they had received nutrition training in the previous two years. In addition, implementation is affected by frequent staff changes due to attrition or rotation.

12) Equipment, Guidelines, and Supplies:

Most health facilities have the necessary equipment, guidelines and protocols to address nutrition in under-five children. However, stock outs of key commodities, a general shortage of IEC materials, and lack of adequate infrastructure are challenges faced by many facilities.

13) Standards/Norms for Nutrition Interventions:

In the health sector, there are service standards and norms for most interventions, but there are a few where these are missing (e.g. growth monitoring and nutrition education and counseling). Norms and standards were not available for the DSD food access, although there are norms and standards for ECD. There do not appear to be any DAFF norms/standards around household food production interventions.

14) Appropriate and Sufficient Resource Allocation:

We could find no international benchmarks for the appropriate staffing and funding of nutrition interventions in a country. Most of the resources allocated to nutrition are "blended" into the budgets of other programmes. While this is appropriate for achieving integrated services delivery, it does make it difficult to determine if resources are adequate and sufficient across all sectors and provinces.

15) Appropriate Community-level Structures:

In the health sector, community-based delivery is generally limited and most nutrition services are currently facility-based. However, in more rural areas of KZN and EC, community-based staff are increasingly being used to extend the reach of services.

Food Access and Food production interventions operate at community-level, but they are not community-based, as staff travel to communities to delivery services. As a result transport issues do at times pose a constraint in the continuity of services in communities.

16) Institutional Arrangements across and within Departments:

At national level, the DAFF-led INP coordination is not functioning as intended. At provincial level, WC, EC, and KZN have inter-departmental coordination mechanisms, but their effectiveness varies. KZN and EC both have coordination mechanisms situated above the department level. The KZN-OSS mechanism further facilitates a coordinated response at the ward level using a household-based case-management approach.

Referral mechanisms within DOH generally work well. DSD and DAFF services generally do not require internal referrals.

17) Monitoring and Evaluation:

There is a general lack of routinely-reported indicators or data points to track the supply of nutrition interventions delivered (disaggregated by key target groups) as well as the effects of these interventions on nutritional status. There is a lack of common metrics for the INP that consolidates the measurements of nutrition implementation from different sectors.

Conclusions

Despite the presence of the INP, South Africa has made limited progress in improving child nutrition since 1999. Stunting rates remain high at 21% of all children under five, and poor nutrition is the principal factor in deaths of South African children under five. The DoH, DSD, DAFF, and DRDLR each have sufficient policies and strategies for guiding their respective

portfolio of nutrition interventions. However, the evidence from this evaluation points to unequal commitment to nutrition across the three departments with varying leadership, management, planning, budgeting, and staffing. The absence of a coordination body above the line ministries (to which each department would be held accountable) – along with the absence of consolidated operational plan with a common goal, clear objectives, and common metrics for tracking food and nutrition interventions across all sectors and all levels of implementation – has led to a silo'd and somewhat fragmented approach to addressing child nutrition in South Africa.

Staff shortages, insufficient nutrition training, and generally limited nutrition knowledge constrains the effectiveness of implementation across all departments. In addition, there is an absence of coordinated service delivery at local level whereby social workers, health workers, and food security personnel share information and harmonise their responses. There are also few partnerships with NGOs and CBOs across all sectors. Both these factors limit the reach and uptake of the 18 nutrition interventions.

Beneficiaries are generally responsive to government nutrition interventions, particularly DoH health services for the sick child and DSD Food Access interventions. However, beneficiaries are less responsive to household food production and breastfeeding promotion, reportedly because of cultural and/or social values that inhibit uptake. The government's relatively infrequent use of mass media for promoting nutrition limits its ability to "focus and customise messages to targeted beneficiaries", particularly in light of intensive marketing by food companies (of non-nutritious foods) to the general public.

Most health facilities have the necessary equipment, guidelines, and protocols; however, frequent stock outs of key commodities, a general shortage of IEC materials and lack of adequate infrastructure are challenges faced by many facilities.

Food access and food production interventions primarily focus on the quantity of food provided with limited attention to the quality and nutrient-density of the foods. South Africa's food security strategy has focused on commercialisation and does not cover nutrition in a substantive way.

Regulations exist to govern food fortification and the inappropriate marketing of breast milk substitutes. The presence of these regulations underscores the South African government's commitment to addressing malnutrition. However, monitoring mechanisms are limited. In addition, no policies or regulations currently exist which govern the inappropriate marketing of unhealthy (obesogenic) food to children.

Recommendations

R1. According to the most recent national data (SANHANES, 2013), 26.9% of boys and 25.9% of girls aged 1-3 years old are stunted, which has increased from 2005. The high levels of stunting are creating a long-term and debilitating problem for the country in terms of longevity, educational outcomes and productivity of people, and its related contribution to economic growth. **Nutrition of under 5s should be elevated to the level of an output of Outcome 2 on Health, and so included in the Medium-Term Strategic Framework and the Delivery Agreement.**

R2. **Develop a well-defined Nutrition Plan for nutrition outputs across all sectors** that operationalises national priorities and investments in nutrition to achieve integrated and consolidated goals (including an explicit goal to reduce stunting in children under 5), objectives, activities, targets, and budget at all levels national, provincial district, facility and community. This plan should be developed in time for the approval of the Medium Term Strategic Framework (MTSF) after the elections, and its subsequent cascading into strategic plans. This plan should:

1. Include common, measurable goals to create coherence across the various food and nutrition security policies, in the short, medium and long-term.

2. Re-configure or consolidate service-specific policies, strategies, and guidelines along life cycle stages, rather than basing them by the intervention (Figure 13). This could help health workers to understand all the elements required in interacting with a client of a certain age, as well as to facilitate integration of nutrition into service provision.
3. DoH, DSD, and DAFF should work together to plan and then provide a comprehensive package of services to the vulnerable families and communities. Referrals and linkages between the different departments' services depend on close communication and integrated information systems to track the delivery of services as well as progress in remediating the nutrition problem. The KZN OSS is an example of this type of integration.
4. Communicate effectively about the Nutrition Plan across sectors and levels of government (national, provincial, municipal, district, facility, community).
5. National Treasury is doing an expenditure review of nutrition and this should be done quickly to inform this planning process and to revise budgets for nutrition.

R3. As part of the Nutrition Plan create common indicators for tracking Food and Nutrition across all sectors with a common and consolidated M&E framework for tracking both the delivery and the effects of nutrition interventions prioritised under the Plan. This should include:

1. Creating Sensitive Indicators to measure the outputs of nutrition programmes: particularly food fortification; micronutrient supplementation, ORS, Zinc, breastfeeding and complementary feeding; as well as changes at outcome level in terms of changed practice.
2. Indicators need to be able to be tracked for priority groups including pregnant women and children under 5, in both administrative data and surveys. Work with Statistics SA and the Demographic Health Survey and SANHANES to see how there can be better tracking of changes in practice of these groups.

R4. Elevating nutrition to an output should be accompanied by placing nutrition to at least a cluster manager in national DoH and to a **directorate level at provincial DoH.** Districts also need a nutrition-trained person. Other national and provincial departments need a nutrition-trained focal person to manage their contributions. Vacant posts must be filled. National DoH should track this.

R5. **Stronger coordination** is needed of the implementation of nutrition interventions by the individual line ministries responsible for the nutrition response, and ensuring that the nutrition programme plan is being followed. The **national DoH is the natural champion** as most interventions are within its domain. Support is needed from the Presidency to elevate the political profile of nutrition. An integrated programme plan is needed to facilitate cross-sectoral collaboration, and facilitates more effective consolidated planning, budgeting and oversight of each ministry's performance in achieving nutrition goals. DPME needs to look at lessons which can strengthen programme coordination mechanisms.

R6. Establish a **National Nutrition Council** as a coordinating council, like SANAC for HIV/AIDS, which has broad representation from key government sectors and programmes, civil society, suitable involvement of the private sector, to mobilise all sectors around nutrition. The DoH will provide the secretariat for this. As has been done for maternal mortality and morbidity (COMMiC), this Council should be served by a committee of experts – a Committee on Nutrition (COMMoN). Other committees addressing infant and child health should also have a nutrition focal point.

R7. Change **focus of services and communication** across relevant sectors to focus more on promotion and prevention, exclusive breastfeeding, complementary feeding, dietary diversity, hygiene education and to help create an enabling environment:

1. DoH to use real **change management efforts** to change behaviours (e.g. to ensure exclusive breastfeeding for 6 months). Do not expect only counselling of mothers to effect practices; their support network (grannies, husbands, community leaders) must understand and support the new practice. Examples for achieving this include the use of TV and radio as platforms to educate about sound nutrition. Make use of civil society and CHWs/CCGs to provide relevant nutrition counselling and to help change behaviours and attitudes at community and household level. This should be a key focus of the Nutrition Plan.
2. DoH to create a specific, well-defined, dedicated **health promotion and communication strategy on nutrition for under 5s**, as happened for HIV/AIDS. At the moment, nutrition education (forming part of other strategies) is not reported on as an individual outcome and therefore not prioritized. Develop relevant multi-media IEC interventions (e.g. radio in EC) and materials to address incorrect or negative perceptions about nutrition interventions e.g. perceived stigma around the use of targeted supplementary feeding (TSF), and counter messages to food advertising. Use the public broadcaster (both TV and radio) to educate pregnant women and children under 5 about the importance of sound nutrition, use celebrities to elevate the status of breastfeeding, and encourage good nutrition practices targeting all members of the family.
3. DoH to address the growing problem of **overweight and obesity** among children under 5 years of age (18.9% overweight/4.9% obesity in girls and 17.5% overweight/4.4% obesity in boys aged 2 to 5 years), and promote exclusive breastfeeding and appropriate infant and young child feeding.
4. Incorporate private providers, NGOs and other civil society actors in behaviour change efforts, and in the proposed National Nutrition Council.
5. DoH to analyse the SANHANES data to see if there is a particular problem for teenage and working mothers in breastfeeding, which may need targeted responses.

R8. **DoH to use the PHC reengineering process to ensure clinics and CHWs** provide growth monitoring and provision of nutrition advice and targeted supplementary feeding and provide appropriate space for counselling:

1. Ensure there is a nutrition-trained person in the PHC teams, ideally nutritionists or dieticians. Training of these specialists has been scaled back because there has been no market for these staff even though the need is great.
2. Ensure pregnant women and children under 5 receive regular health services, either from clinics or CHWs/CCGs or other service delivery points.
    i. Develop **"a one-stop" approach** for delivering routine health/nutrition interventions at community level to provide mothers/care givers a full range of services during one visit. Such an approach complements the *eventual* scale-up of PHC re-engineering.
    ii. Use **Community Level Assistants** (CHWs/CCGs) as in KZN to identify, refer, and follow-up underweight, stunted and overweight children and pregnant and lactating mothers and give talks to communities on nutrition and advice to mothers on food preparation and appropriate feeding practices. Training needs to be improved to ensure that quality growth monitoring is being done. This model is equally relevant to other sectors such as

community food gardening advisors, community animal health workers. DPME should evaluate the optimal use of community-based workers in different sectors and identify lessons for widespread scale-up of such models.

iii. Similarly, to make this work, there will need to be **an expansion of NGO involvement**. In the health sector such partnerships are more common with PMTCT services, but there are some nutrition-focused NGOs such as Philani working with health facilities in EC and WC. DPME should conduct an evaluation of the experiences of NGO delivery of services for government and how these can be scaled-up effectively, for nutrition but potentially for other sectors.

3. As access to supply systems expands, DoH to engage Treasury and DSD to consider the possibility of conditionality such as adherence to basic health monitoring (i.e. BANC, vaccination schedule, and growth monitoring) to social grants.

R9. Promote use of healthy and diverse food:

1. DSD to consider options to **restrict use of vouchers to prescribed food options**, e.g. by linking voucher use/parcels only to fortified staple foods and VAT zero-rated food.
2. DoH to develop guidance on food quality and diversity for DSD interventions such as soup kitchens/ECD and for DSD/departments of agriculture for good gardens.
3. Rather than focusing on the quantity of food consumed, departments of agriculture should change strategies to focus on **diversified diets** by emphasising the production of special crops with high nutritional value (e.g. Orange-fleshed Sweet Potato, morogo) and promotion of local food production and preservation of food, as well as goat's milk.
4. Establish and enforce regulations to **reduce children's access to unhealthy foods**, including restricting fundraisers from selling unhealthy food at functions; adding taxes to unhealthy food, regulating fast foods; prohibiting sweets and unhealthy foods at supermarket checkout aisles; and prohibiting unhealthy food at ECD centres. Use the National Nutrition Council to name and shame companies promoting inappropriate food. Consider other policy options as indicated in Annex 4. Ensure **food companies adhere to food fortification regulations** and other codes of marketing practices. DoH to establish linkages with the National Consumer Commission (NCC) to encourage whistleblowing on companies that transgress regulations on inappropriate marketing of food to children. Violations should be treated seriously and the companies should be charged accordingly.
5. DoH to review the micronutrient programme to (i) use CHWs/CCGs to distribute Vitamin A twice per year, optimise the levels of bioavailable micronutrients in fortified foods and explore alternative delivery mechanisms, e.g. multiple micronutrient powders; (iii) DSD to use fortified products DoH-approved, (iv) explore more effective mechanisms for engaging small millers to fortify grain, or by promoting household fortification.

R10. Improve Knowledge, Skills and Attitudes:

1. Improve pre- and in-service nutrition **training** of health, agriculture and social development employees (including ECD Managers) to expand knowledge and skills (e.g. diagnosing malnutrition; nutrition education, and teaching communities to plant and care for gardens).

2. Levels of awareness of nurses of key nutrition messages only averaged 50% in the 3 provinces apart from KZN, and means to ensure regular training is needed. Nutrition should be included in pre-service training and regular updating of health professionals including doctors and nurses through strong partnerships with academic institutions. Academic institutions should be involved as with the example of the UKZN working closely with the DoH in KZN, and University of WC students giving talks at ECD centres.
3. Create Standard Operating Procedures (SOPs) for all nutrition programmes specifying the steps to be taken and referrals/follow-up. These SOPs should be published in wall charts for easy reference. This is particular important around behaviour change interventions e.g. breastfeeding counselling and support, hygiene education.
4. Expanding the use of CHEs/CCGs and support groups can take off some of the load from nurses and provide them with more time for counselling, and additional support. KZN has allocated dedicated nutrition advisors in every clinic, as well as CHWs trained in nutrition.

R11. Improve focus on food security:

1. Food security should be a sub-output of the main nutrition plan with some standard indicators. There is a challenge of who is the right champion for this. DAFF's food security strategy has focused on commercialisation and does not cover nutrition in a substantive way. However even supporting household subsistence production requires technical skills. The key champion for food production for subsistence needs to be clarified and if it is to be DSD then significant technical expertise needs to be provided.
2. A review of the experience of NGOs supporting food gardens in SA should be undertaken and a major new programme designed, using NGOs and community-extension mechanisms. There is extensive experience internationally in doing this at scale (e.g. PRADAN in India) which should be brought in to assist in the planning.
3. Support for food production should include nutritious indigenous foods (e.g. morogo, orange sweet potato), as well as small livestock. DSD food parcels should contain only nutritious foods including fresh produce procured locally e.g. through cooperatives.
4. DSD should increase registered ECD sites and learners subsidised, thus improving their access to food. The menu guidelines must be followed and implementation monitored.
5. There is a need to standardise measurement of food security to incorporate nutrition indicators at national, provincial and district levels, including for impact indicators such as level of stunting. DAFF should work with DoH to do this.

R12. Reduce frequent **stockouts** for food supplements, ORS, Zinc, as well as equipment such as breast pumps and posters. The budget needs to be ring-fenced as a non-negotiable.

R13. At Provincial level, DSD to establish with the War on Poverty unit in DRDLR a **case management approach**, based on household vulnerability and determinants of malnutrition. This would allow for better targeting of vulnerable households and a more comprehensive and harmonised delivery of the various nutrition interventions. This approach is being used in KZN and it seems to be working at a provincial and ward level in DoH, but less so at district level and with the provincial department of agriculture. Such an approach could also facilitate the monitoring of household uptake and behaviour, in contrast to the current monitoring system which only monitors the supply of services and

not utilisation. A particular target would be pregnant and breastfeeding women and children U5.

1. Evaluate the KZN experience to identify lessons; if proven to work well, adopt the model.
2. There is duplication of households and communities profiling between DSD, DRDLR, DAFF, and DoH. A standard approach should be used and captured in a common database. Doing so will eliminate multiple profiles and better integrate services. Ensure referrals are tracked and followed and successfully addressed. SASSA cards provide the opportunity to track vulnerable children and resources provided.
3. There should also be tracking of severely malnourished children leaving hospital to ensure that the family are linked to food and nutrition support.

1 INTRODUCTION

1.1 Background to the Nutrition Evaluation

Malnutrition in infants and young children typically develops from poor breastfeeding and infant feeding practices and is exacerbated during the period between 6 and 18 months of age and is often associated with low intake of nutrients and frequent infections. Linear growth (i.e. height) and brain development are especially rapid during the pregnancy and 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 early, before the age of 6 months, complementary foods with low nutrient/energy density and poor bioavailability of vitamins and minerals. The data from the multi-country WHO growth standards study show clearly that poor breastfeeding and infant feeding practices result in poor growth rates in children, the negative effects of which start to show very soon after birth.[5] 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.

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 addressing 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 emphasising 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.

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).

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[6] (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)[7] which found that 21.6% of children age 0-5 are stunted.

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 proven high impact 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 Annex 1.

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
Breastfeeding support*	Health
Management of moderate malnutrition including targeted supplementary feeding*	Health
Household food production and preservation (home gardening)	DAFF
Food access (e.g. food parcels, soup kitchens)	DSD
Early Childhood Development (ECD) (food in ECD centres)	DSD
Complementary feeding*	Health
Food fortification (Vitamin A, Iron and Iodine)*	Health
Micronutrient including Vitamin A supplementation*	Health
Oral Rehydration Salts (ORS) and Zinc*	Health
Management of severe malnutrition*	Health
Deworming	Health
Growth monitoring and promotion including the use of Mid-Upper Arm Circumference (MUAC) measurements	Health
Nutrition education and counseling (part of all of these)	Health
Improving hygiene practice (including in relation to water and sanitation)	Health
BANC (Basic ante-natal care) – education and supplements, timing	Health
IMCI (Integrated management of childhood illnesses)	Health
Access to (nutritious) food, food prices	DAFF
Food security (output 2 of outcome 7 in the National Priority Outcomes)	DRDLR/DAFF

* High impact interventions

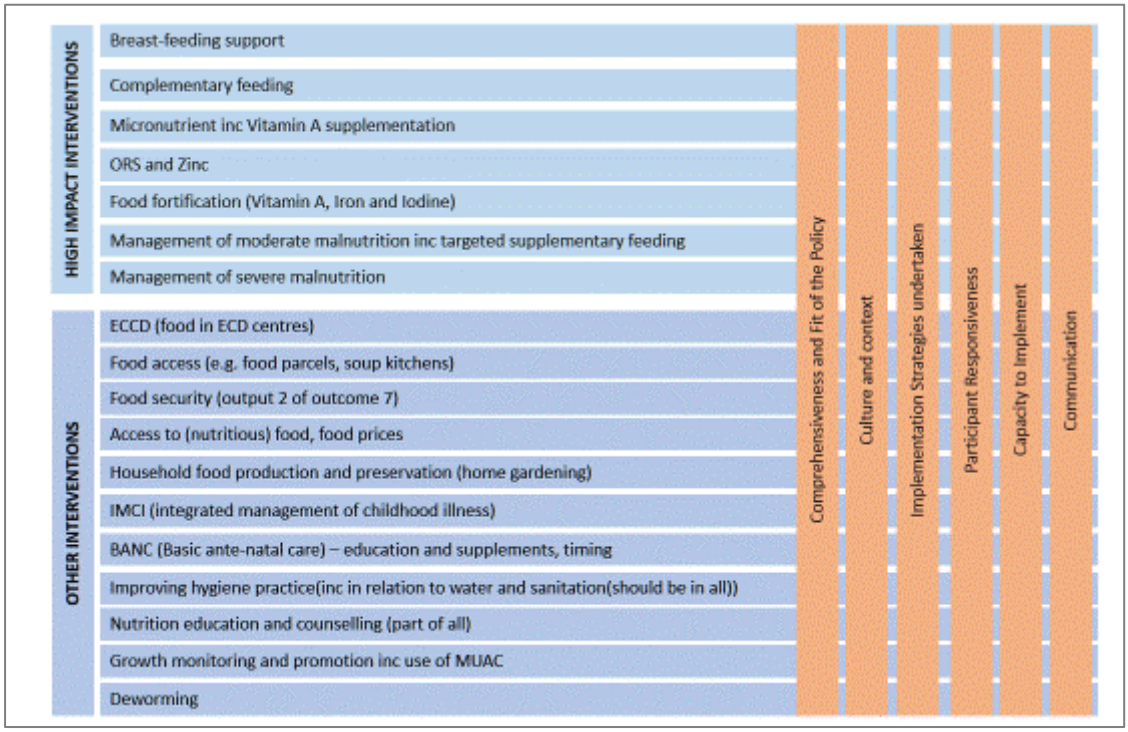
1.3 Approach and Conceptual Framework

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 interventions specific for children U5 and the 18 selected 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



1.4 Methodology

1.4.1 Literature Review

The starting point for this evaluation was a literature review that provided the context for this implementation evaluation, and a comparison of South Africa's nutrition response to that of 5 countries that have successfully improved their nutrition performance (Brazil, Colombia, Malawi, Mozambique, and Malaysia). These comparison countries were 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);

The Literature review examined the following relevant topics: (i) Current health and nutrition status of children under 5 and pregnant women in South Africa; (ii) South Africa's policy framework on maternal and child nutrition; (iii) A review of nutrition policies and interventions from the five comparison countries, and (iv) An analysis of implementation issues present in the literature.

Notable characteristics in the comparison countries' nutrition responses were: coordination; common operational plans across all relevant sectors; focus on quality of food consumed and dietary diversity; conditional cash transfers; and common metrics for tracking food and nutrition interventions across all sectors.

South Africa has shown very little improvement between 1999 and 2012 in reducing underweight or wasting, compared to other countries. In addition, South Africa's double burden of overweight and underweight is much higher than the comparison countries.

Of the 6 countries, only South Africa lacks a common operational plan for consolidating nutrition activities and targets across sectors and at all levels of implementation. There is also no coordinating body which can hold the line ministries accountable in terms of their contribution to nutrition.

1.4.2 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 selection of provinces is further described in Annex 2.

In each province, 2 districts were purposefully selected based on their levels of performance (i.e. high performing and low performing), based on recommendations from provincial nutrition focal persons. In each district, Khulisa 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.

Table 2. 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 (Umthatha)	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

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 Annex 2.

1.4.3 DATA COLLECTION METHODS

Data collection methods used, the target respondents for each method, as well as the content explored can be seen in Annex 2.

1.4.4 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. 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 infrastructure, equipment and supplies for delivery of nutrition interventions, and (ii) an assessment of health worker's knowledge around nutrition interventions.

1.4.5 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.

1.4.6 DATA ANALYSIS

Qualitative data was analysed using content analysis, from the notes that had been transcribed into Excel. The model of trustworthiness was utilised to determine the 'reliability and validity' of the data. The model involves four aspects of trustworthiness which are discussed in the section on data analysis in Annex 2. Once the qualitative notes were checked for trustworthiness, these were written up into Excel and coded for themes. These themes were counted and reported on according to the KII and FGD questions.

1.5 Limitations of the Evaluation

This evaluation's extremely broad scope 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.

1.6 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 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

2 NUTRITION SITUATION IN SOUTH AFRICA

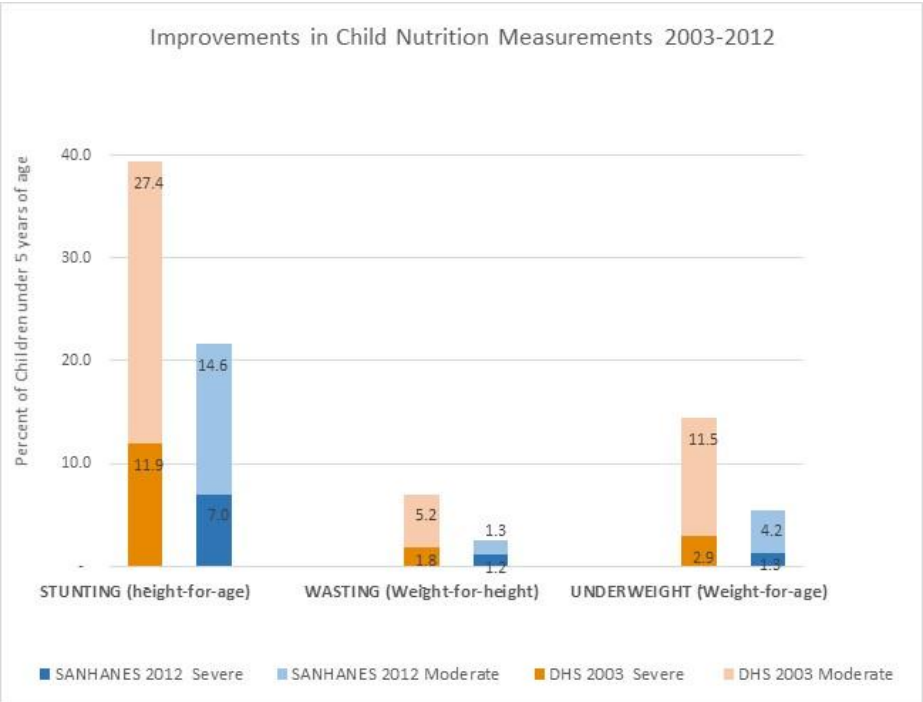
2.1 Trends in Nutritional Status (1999-present):

Although the Government of South Africa's per capita investment in the health sector is the second highest in Africa – at USD 649 per person, health and nutrition outcomes are much poorer than many other countries with less investment [8] [9] [10]. Currently in South Africa:

- One of every 244 women dies in pregnancy or childbirth, the vast majority of whom (more than 80%) are well upon admission to a health facility[11].
- South Africa is one of only 12 countries where mortality rates for children have increased since the baseline for the Millennium Development Goals (MDGs) in 1990 [12]:
  - One in 17 children (5.8%) dies before his/her fifth birthday and South Africa in on the UNICEF list of 75 "countdown" countries with high rates or numbers of child deaths[13].
  - 64% of all deaths in children under the age of 5 have malnutrition as a contributing factor[14].
- Growth indicators of nutritional status show improvements since 2003 Figure 2, but many children still are too short (stunted) or too thin (underweight) for their age (Figure 2), and UNICEF includes South Africa as one of 24 high-burden countries that account for 80% of world's stunted children[15].
  - The recent SANHANES survey (2012) found that 21% of South African children under 5 are stunted as a result of being deprived nutritionally for the first two years of their lives[16]. Rural areas, have higher stunting rates (26%) compared to urban areas (21.25%)[16].
  - Four percent (4%) of children in 2012 were underweight[16].

Figure 2 below shows the changes in stunting, wasting and underweight from the 2003 DHS data[19] vs. the 2012 SANHANES data [17].

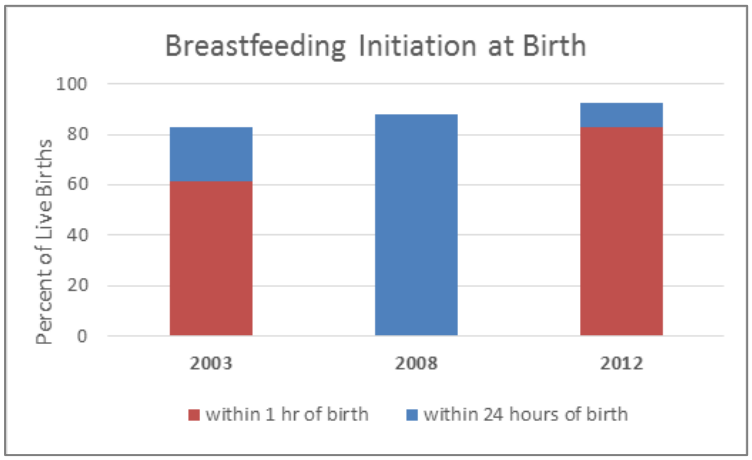
Figure 2. Changes in Stunting, Wasting, and Underweight from 2003-2012[17, 19]



The SA DHS sample was designed to be a nationally representative probability sample of approximately 10 000 households[19]. The SANHANES-1 sample was based on the HSRC 2007 Master Sample, 500 Enumerator Areas (EA) representative of the socio-demographic profile of South Africa, and a random sample of 20 visiting points (or households) were randomly selected from each EA, yielding an overall sample of 10 000 households.[17]

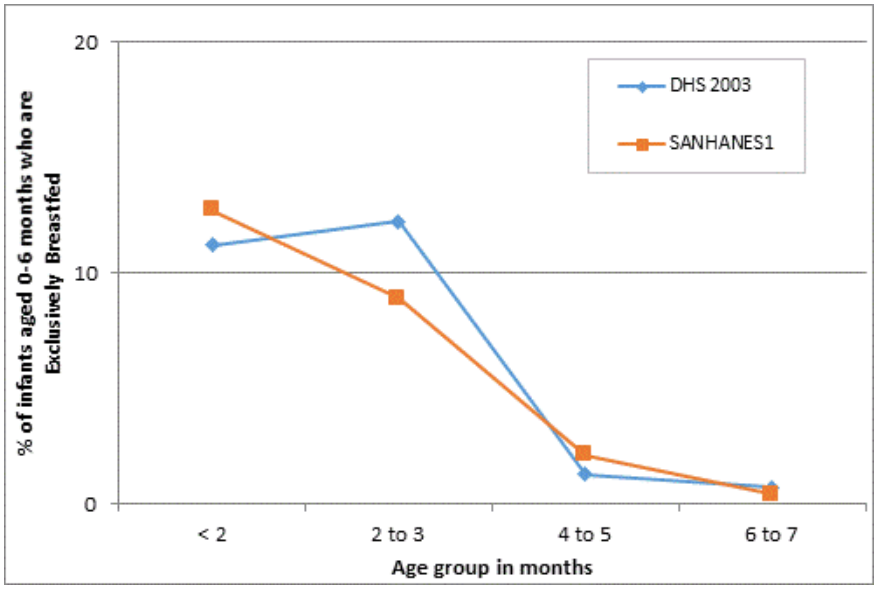
Both studies used questionnaire based data, with the SA DHS utilising five questionnaires: a Household Questionnaire, a Women's Questionnaire, a Men's Questionnaire, an Adult Health Questionnaire and an Additional Children Questionnaire[19]; and the SANHANES-1 obtaining questionnaire-based data through interviews, in combination with health measurements obtained through clinical examination, a selection of clinical tests as well as the collection of a blood sample for selected biomarker analysis[17].Micronutrient deficiencies also persist in children under 5, affecting their physical, motor, and cognitive development and increase the risk of infectious illness and death from diarrhoea, measles, and pneumonia. Despite improvements since 2005, SANHANES found that in 2012 more than 20% of children presently suffer from Vitamin A deficiency, and 10% of children suffer from anaemia[17].

Figure 3. Initiation of Breastfeeding at Birth[16, 18, 19f]



The coverage of nutrition services and related behaviour varies, but is generally not optimal. For example, the recently-published Tshwane Declaration[20], 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. In South Africa, most infants do breastfeed from birth, and the rates have increased since 2003 (Figure 3).

Figure 4. Rates of Exclusive Breastfeeding by Infant Age Group; 2003 vs 2012[17, 19]

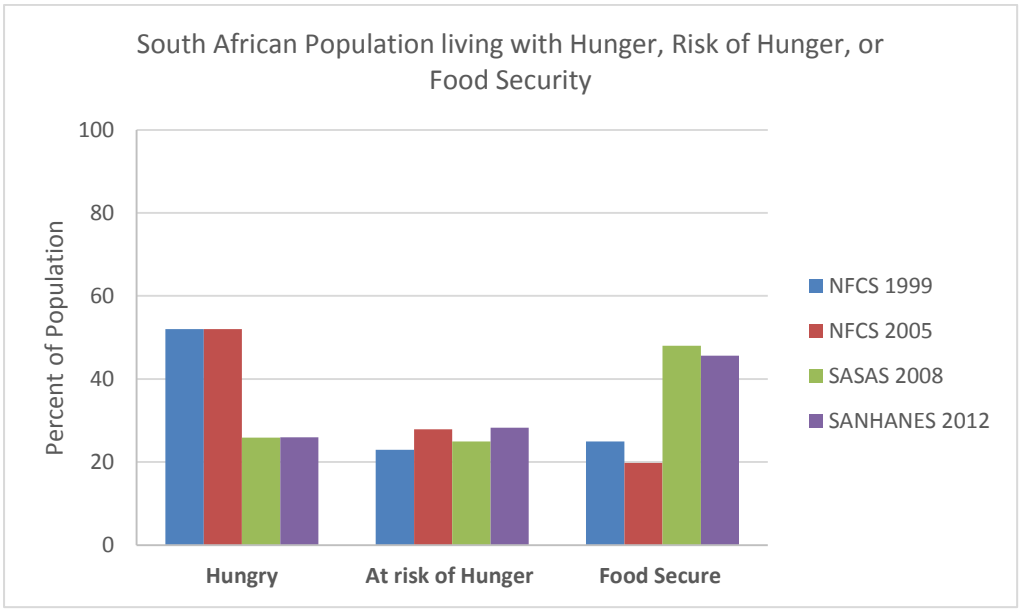


But within the first 2 months of the life, the vast majority of infants have been given other liquids, milks, or solid foods and only 12% of children at 2 months of age are exclusively breastfed (Figure 4). Exclusive breastfeeding practice drops consistently over the next few months of life and at 4-6 months of age, only 2% of infants are exclusively breastfed. These rates have not improved since 2003.

Another example of poor service coverage is that only 42% of South African children under the age of 5 are supplemented with the recommended two doses of vitamin A per year.

Both insufficiency of food (i.e. hunger) and poor quality diets are evident in South Africa and contribute to the poor nutritional status of pregnant women and children. Figure 5 below shows that between 1999 and 2012, food security rates have increased and the proportion of the population that is identified as "hungry" has decreased. But the percent of the population that is at risk of hunger has changed very little over this time period.

Figure 5. Percentage of Population experiencing Food Security or Hunger across 4 Surveys[17]



Poor dietary diversity[21] is another important factor for malnutrition in South Africa. A diet that is sufficiently diverse reflects nutrient adequacy, based on the fact that no single food or food group contain all the required nutrients for optimal health, and monotonous diets based mainly on starches have been associated with food insecurity and with stunted growth[22]. A dietary diversity score (DDS) less than 6 is considered to represent a poor quality diet. In a national survey in 2009[22], the mean DDS was 4.02, with 38% of the population having a DDS of less than 4. Poor DDS in that survey was associated with low Living Standards Measurement (LMS) status. In the 2012 SANHANES, dietary diversity scores have hardly changed[17]. Mean diversity scores across the country were 4.2, with lower scores (less than 4) found in rural informal areas.

Between 1999 and 2012, South Africa's performance in health and nutrition compares poorly to the 5 comparison countries selected for this evaluation (described on page 3). In nearly every child health and nutrition indicator, South Africa's trend from 1999-2012 is unchanged or deteriorated, while trends in the five comparison countries has often improved. Trends in infant and child mortality rates across 6 countries (Figure 6 and Figure 7) show that South Africa has little improvement between 1999 and 2012 in relation to the other comparison countries.

Figure 6. Trends in Under Five (Child) Mortality Rate

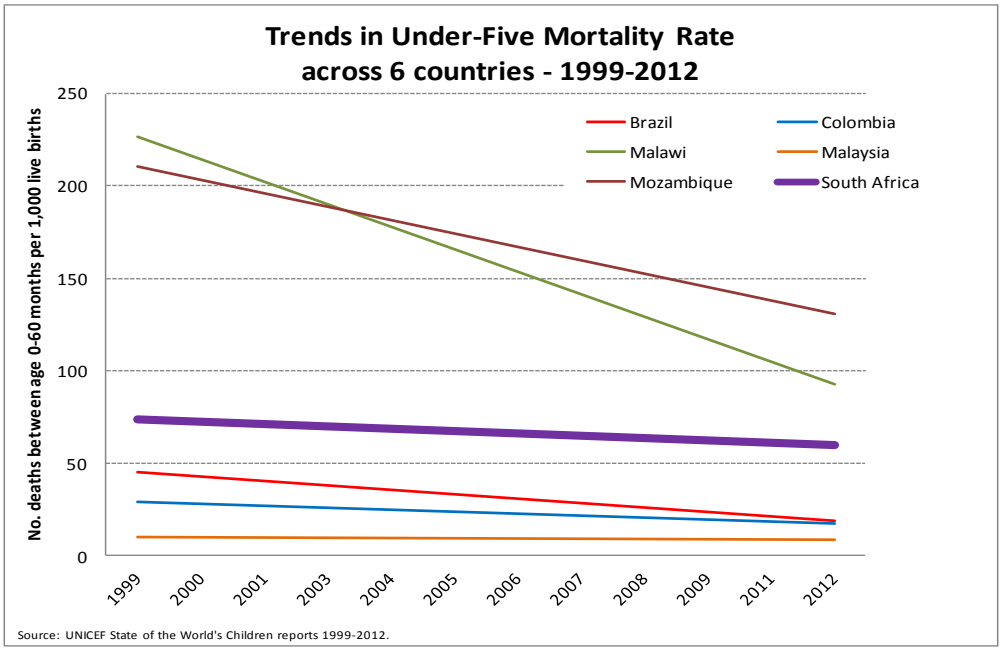


Figure 7. Trends in Infant Mortality Rate

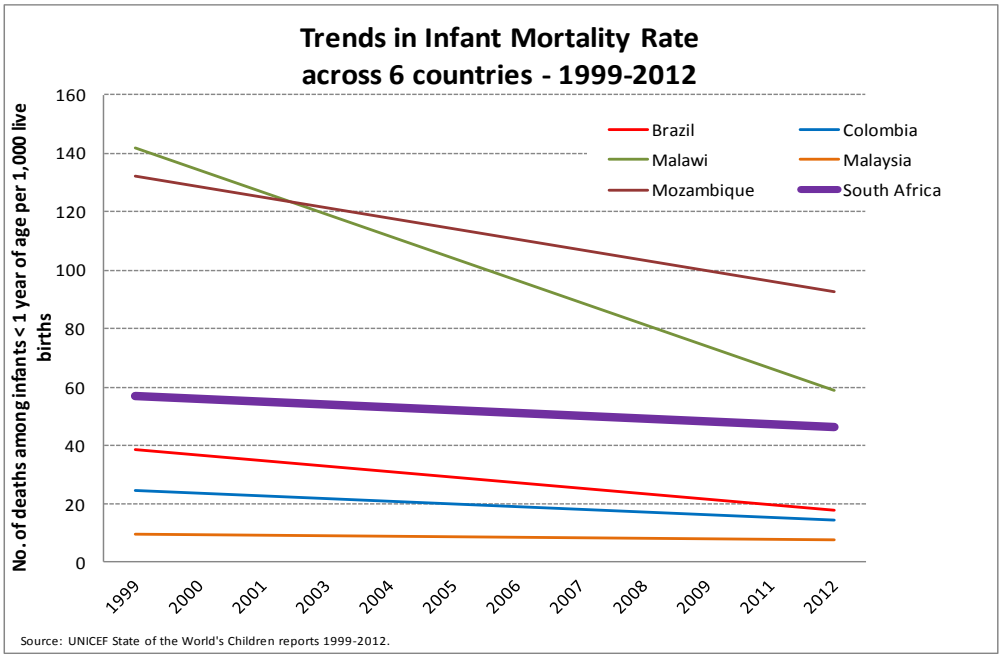


Figure 8 to Figure 11 show a similar trend, with South Africa barely shifting for low birth rate, underweight, wasting and stunting over the 13 year period.

Figure 8. Trends in Low Birth weight

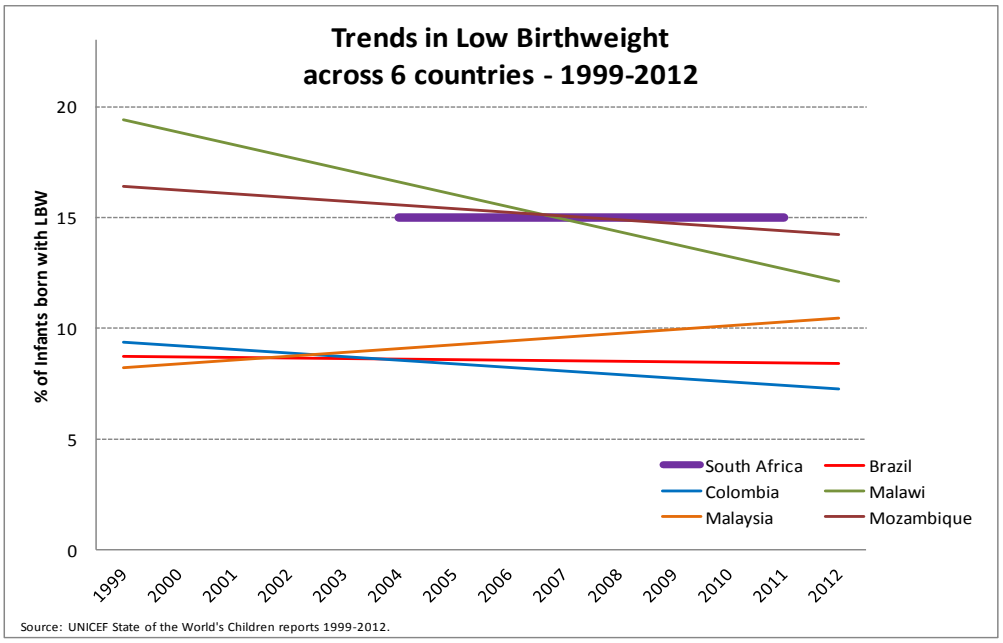


Figure 9. Trends in Underweight (moderate and severe)

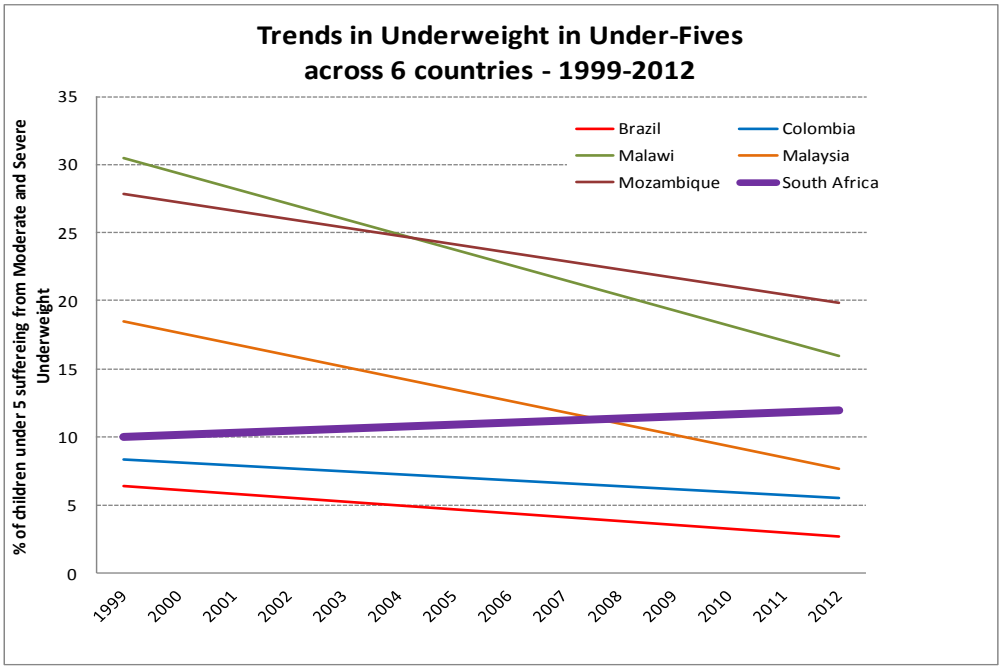


Figure 10. Trends in Wasting (moderate and severe)

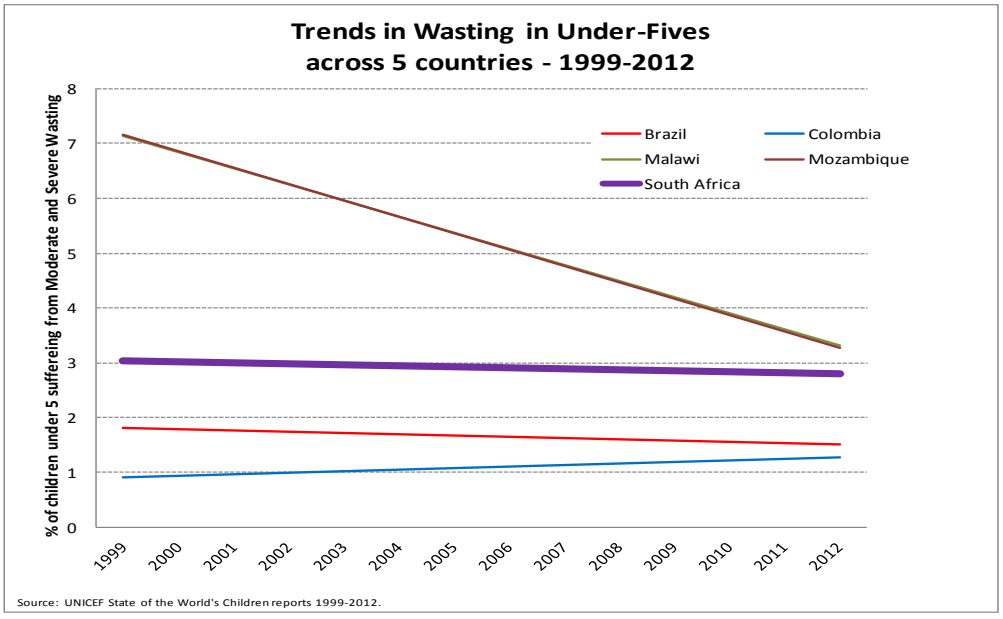
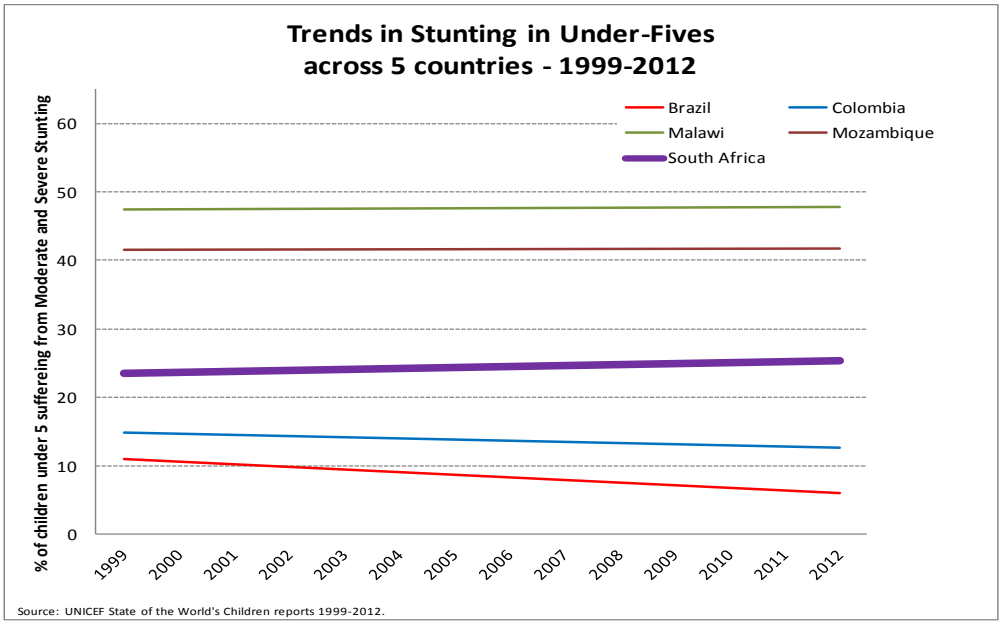
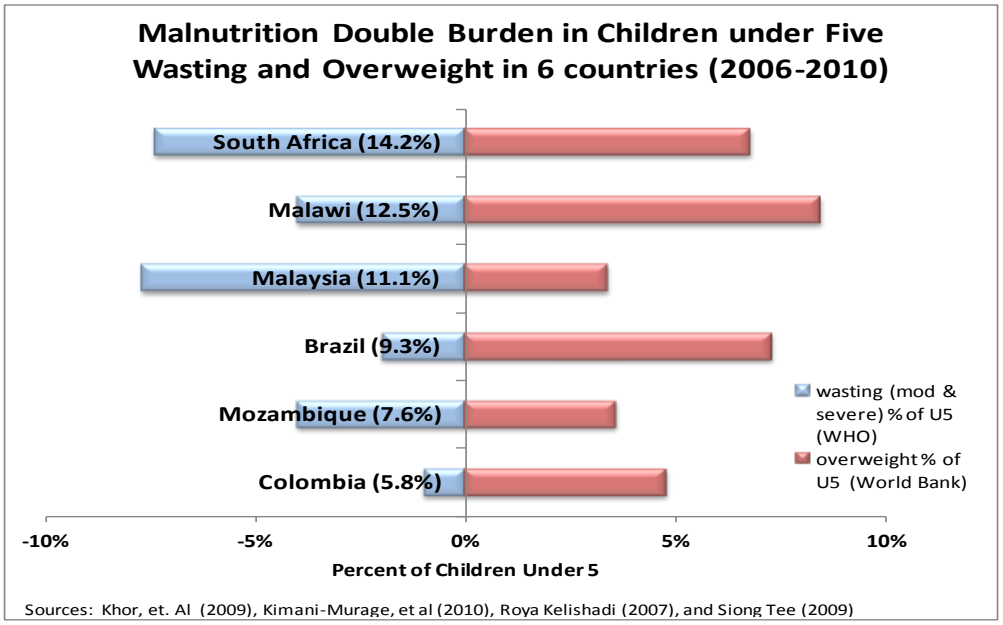


Figure 11. Trends in Stunting (moderate and severe)



While South Africa and the other five all show evidence of a nutrition transition where both under nutrition and over nutrition coexist in children under five (Figure 12), South Africa has a much higher double burden compared to other countries – with more than 14% of all South African children under 5 either over- or under-nourished[23, 24, 25, 26]. Moreover, this double burden is not limited to urban areas of South Africa – both under nutrition and over nutrition were identified in a longitudinal study of nutrition and health found in very rural communities of Mpumalanga Province[24] and in the recent SANHANES survey[17].

Figure 12. Malnutrition Double Burden in Children Under 5



2.2 South Africa's Nutrition Response – Main Policies and Strategies

The Bill of Rights in the South African Constitution states that every citizen has a right of access to sufficient food and water and that every child has a right to basic nutrition. The Constitution of South Africa sets the stage for addressing food and nutrition security in the country as outlined in Section 27: "Everyone has the right to have access to…sufficient food and water…and social security, including, if they are unable to support themselves and their dependants, appropriate social assistance. The state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of each of these rights".

In August 1994, the Minister of Health appointed a committee to develop a more comprehensive nutrition strategy to rectify this largely food-based and fragmented approach to improved nutritional status in South Africa. The introduction of the INP aimed to ensure optimum nutrition through an integrated approach with complementary strategies targeting three areas: health facility services, community based programmes, and nutrition promotion[27].

The INP also stresses the need for all sectors to work together in an integrated manner, and envisioned collaboration between Government departments (inter-sectoral collaboration of line departments and other sectors) as well as within Government departments (e.g. between health-facilities and community-based programmes) to ensure joint action for addressing nutrition problems[27]. Inter-sectoral collaboration was envisioned mainly between the DoH, DSD, and DAFF, as these national departments each deliver food and nutrition interventions specific to their sector.

In 1997, the DoH adopted the Integrated Nutrition Strategy (INS) in its White Paper for Transforming Health Systems and this formed the basis for the INP. Priority INP interventions in the health sector focus on the following interventions to children from conception to age 5:

- Safe infant feeding
- Micronutrient supplements, fortification, and food diversification
- Facility-based Interventions for severe malnutrition
- Growth monitoring and promotion
- Nutrition for disease interventions, including HIV/AIDS and TB, and
- Maternal Nutrition

The combined expected outcome of these interventions should improve the nutritional status of South Africa's vulnerable populations, namely pregnant women and children under the age of five. Since then, South Africa has produced many more policies, frameworks, strategies, and interventions that address child nutrition either directly or indirectly (Table 3). Most of these cover diet and disease factors (primary school programme nutrition, nutrient supplementation and fortification, vitamin supplementation, exclusive breast feeding of infants, various health services), but others seek to address basic and underlying factors for malnutrition (Early Childhood Development (ECD), food parcels, food regulation, food gardening, food security, income grants for the poor and vulnerable, etc.).

This is further operationalised in the recently-drafted National Development Plan[28] which devotes a whole section on nutrition actions, emphasising the importance of access to nutrition interventions in the first 1000 days of life, social grants to the poor, and high coverage of childhood immunisation.

Table 3. Legislation, Policies, Strategies, and Special Programmes related to Nutrition in South Africa

Year	Responsible Department	Legislations, Policies, Strategy, Special Programmes
Legislation		
2012	DoH	Regulations Relating to Foodstuffs for Infants and Young Children. Foodstuffs, Cosmetics and Disinfectants Act 54 of 1972 (updated 2012/12/06) - *Marketing of Breast Milk substitutes*
2012	DoH	National Health Act 61 of 2003 (updated 2012/03/08)
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.
2006	DSD	Children's Act 2005
2004	DSD	Social Assistance Act 2004
2003	DoH	Regulations Relating to Foodstuffs for Infants and Young Children. Foodstuffs, Cosmetics and Disinfectants Act 54 of 1972 (updated 2003) - *Food Fortification Regulations*
1996		Bill of Rights in the Constitution of the Republic of South Africa, 1996 (updated 2009/07/06)
Policies		
2013	DoH	Infant and Young Child Feeding Policy (revised)
2013	DAFF / DSD	National Policy on Food and Nutrition (in process)[29]
2013	DoH	Infant and Young Child Feeding Policy (replaces 2007/8 policy)[30]
2011	DoH	The Tshwane Declaration of Support for Breastfeeding [20]
2010	DoH	The National Integrated Nutrition Programme – Policy Summary and Guide[31]
2007	DoH	A Policy on Quality in Health Care for South Africa
2002	DOAFF	The Integrated Food Security Strategy for South Africa
Regulations		
2008	DoH	Regulations Amending the Regulations Relating to the Fortification of Certain Foodstuffs (No. R. 1206 of 2008)
2003	DoH	Regulations Relating to the Fortification of Certain Foodstuffs (No. R. 504 of 2003)
Strategies		
2013	DAFF	Strategic Plan for DAFF 2012/13 to 2017/18
2013	DoH	Roadmap for Nutrition in South Africa 2013-2017
2012	DoH	Strategic Plan For Maternal, New-Born, Child and Women's Health and Nutrition in South Africa 2012-2016[32]
2012	DoH	South Africa's National Strategic Plan for a Campaign on Accelerated Reduction of Maternal and Child Mortality in Africa (CARMMA)[33]
2011	National Planning	National Development Plan 2030
2010	DoH	PHC Re-engineering
2009	DoH	Baby Friendly Hospital Initiative
2002	DAFF	Integrated Food Security Strategy (IFSS)[34]
2001	DOE	White Paper 5 on Early Childhood Education in South Africa
Special Programmes		
2013	DAFF	Fetsa Tlala ("End Hunger")[29] food production intervention
2011	DSD	Food for All Campaign[35]
2009	RDLR	The Comprehensive Rural Development Programme (CRDP)[36]

Year	Responsible Department	Legislations, Policies, Strategy, Special Programmes
2008	DAFF	Ilima/Letsema project[37]
2006	DAFF	Integrated Food Security and Nutrition Programme (IFSNP)[38]
2004	DAFF	The Comprehensive Agriculture Support Programme (CASP)
No date	DSD	Sustainable Livelihoods Programme
1991	Treasury/SARS	Tax exemption for nutritious foods
No date	DAFF	Zero Hunger

South Africa's varied nutrition policies, strategies, and interventions meet nearly all the UNICEF recommendations (Table 4) for nutrition intervention throughout the life cycle, but for many of the interventions, data is not available to track implementation or coverage. A notable gap in Table 4 is the absence of policies that explicitly promote the use of locally available nutritious foods. However, there are interventions that are being piloted to determine the efficacy and acceptability of such an approach. An example of this are the MRC's projects promoting the use of locally available Vitamin A rich foods in KZN.[39]

Table 4. UNICEF: Priority interventions for Pregnant Women and Children under 5[40] with Current Coverage[41]

LIFE CYCLE STAGE	Evident in SA Policy?	Current Coverage
ADOLESCENCE/PRE-PREGNANCY		
Interventions for the mother		
– Iron and folic acid supplements or multiple micronutrient supplement, and deworming	Yes [a, b ,d]	Data not collected
– Food fortification with folic acid, iron, vitamin A, zinc and iodine	Yes [c]	62% for maize 74.8% for wheat flour
PREGNANCY		
Interventions for the mother		
– Iron and folic acid supplements and deworming	Yes [d]	Not collected
– Multi-micronutrient supplementation	Yes [a, b]	No data available
– Iodized salt consumed as table salt and/or as food-grade salt (used in food processing)	Yes [i]	76.7%
– Treatment of night blindness in pregnancy	No	N/A
– Fortified food (with iron, folate, zinc, vitamin A)	Yes [c]	62% for maize 74.8% for wheat flour
– Improved use of locally available foods to ensure increased intake of important nutrients	No	No data available
– Fortified food supplements (e.g., corn-soya blends, lipid-based nutrient supplements) for undernourished women	Yes [j, p]	Data not collected
BIRTH		
Interventions for the infant		
– Initiation of breastfeeding within 1 hour (including colostrum feeding)	Yes [m]	90%
LESS THAN 6 MONTHS		
Interventions for the mother		
– Vitamin A supplement in first 8 weeks after delivery	No	Informed by the available evidence, WHO no longer recommends vitamin A supplementation for postpartum women, and South Africa has recently adopted this recommendation.
– Multi-micronutrient supplementations	Yes [a ,b]	No data available

LIFE CYCLE STAGE	Evident in SA Policy?	Current Coverage
– Improved use of locally available foods, fortified foods, micronutrient supplementation/home fortification and food supplements for undernourished women	Yes [a, b]	Data not collected
Interventions for the infant		
– Exclusive breastfeeding in the first six months of life	Yes [b, d, e, i , j]	2%
– Appropriate feeding on HIV-exposed infants	Yes [k, o l]	Data not collected
6-23 MONTHS		
Interventions for the mother		
– Improved use of locally available foods, fortified foods and food supplements for undernourished women	No	Data not collected
– Hand washing with soap	Yes [d, e]	Data not collected
Interventions for the young child		
– Timely, adequate, safe and appropriate complementary feeding (including improved use of local foods, multi-micronutrient supplementation, lipid-based nutrient supplements and fortified complementary foods)	Yes [e, l]	No data available
– Continued breastfeeding	Yes [d, e, g]	13.4%
– Appropriate feeding of HIV-exposed infants	Yes [k, o l]	Data not collected
– Zinc treatments for diarrhoea	Yes [d]	Data not collected
– Iodized salt consumed as table salt and/or as food grade salt (used in food processing)	Yes [i]	76.9%
– Vitamin A supplementation and deworming	Yes [b, d, f, g]	42%
– Management of moderate acute malnutrition	Yes [J]	No data available
– Hand washing with soap	Yes [d, e]	Data not collected
24 – 59 MONTHS		
Interventions for the young child		
– Vitamin A supplementation with deworming	Yes [b, d, f, g]	42%
– Multi-micronutrient powder or fortified foods for young children	Yes [c]	Data not collected
– Iodized salt consumed as table salt and/or as food grade salt (used in food processing)	Yes [i]	76.9%
– Management of severe acute malnutrition	Yes [d ,h, n]	No data available
– Management of moderate acute malnutrition	Yes [j, n]	No data available
– Hand washing with soap	Yes [d, e]	Data not collected

[a] 2007 Guidelines for Maternity Care in SA; [b] Basic Ante-natal Care (BANC); [c] Fortification Regulations; [d] Integrated Management of Childhood Illnesses (IMCI); [e] Infant and Young Child Feeding (IYCF) Guidelines; [f] Vitamin A Supplementation Protocol; [g] Growth Monitoring and Promotion; [h] WHO Management of Severe Acute Malnutrition; [i] Salt Iodization regulations; [j] WHO Community- based Therapeutic Care (CTC) guidelines; [k] Guidelines on HIV and Infant Feeding; [l] Prevention of Maternal to Child Transmission (PMTCT) 2010 Clinical Guidelines; [m] Mother Baby Friendly Initiative (MBFI); [n] INP policy; [o] SA National Guidelines for People living with HIV; [P] Targeted Supplementary Feeding

2.3 Comparison of South Africa's Response to that of Other Countries

Each of the 5 comparison countries – Brazil, Colombia, Malawi, Malaysia, and Mozambique – as well as South Africa have instituted multi-sectoral and holistic approaches to address the immediate, underlying, and basic causes of malnutrition. Table 5 compares key features of each country's response for tackling malnutrition. Notable characteristics of the various responses include the following:

- Coordination: nearly all comparison countries have a mechanism to coordinate the implementation of nutrition interventions by the individual line ministries responsible for the nutrition response. In Brazil and Malawi, however, this coordination mechanism sits above the line ministries affiliated to the Office of the President, and this elevates the political profile of nutrition, facilitates cross sectoral collaboration, and facilitates more effective consolidated planning, budgeting and oversight of each ministry's performance in achieving nutrition goals. Brazil has established an advisory council (called CONSEA) that has a direct institutional link to the executive branch (i.e. Presidency), and that is

composed of broad representation from civil society as well as key government sectors and programmes. CONSEA is also responsible for regular follow-up on the various nutrition programmes for ensuring the consideration of matters other than budget control. The inclusion of civil society in CONSEA (38 members from non-governmental organisation (NGOs) social movements/networks, labour unions, religious institutions, professional associations and academia) is said to encourage their participation in effective implementation of nutrition programmes and interventions.

In both Mozambique and South Africa, the coordination for food security and nutrition rests in each country's Department of Agriculture. Although Mozambique's multi-sectoral coordination body aims to promote a comprehensive response to Food and Nutrition Security, it has been criticised for lacking the autonomy needed to address the challenges of multi-sectoral coordinating. Likewise, in South Africa, the DAFF Directorate for Food Security has been equally criticised for being "institutionally weak" with no real ability to compel other DAFF directorates, let alone other government departments, to fall into line with the food security strategy[42].

- Common Operational Plan across all sectors: Of the 6 countries, only South Africa lacks a common operational plan for consolidating nutrition activities and targets across sectors and at all levels of implementation. Brazil has its National Food and Nutrition Security plan, Malawi has its National Nutritional Policy and Plan which operationalises national priorities and investments in nutrition to achieve MDGs, and Mozambique has its multi-sectoral plan for reducing chronic malnutrition. In South Africa, each government department has its individual plan, but these are not consolidated into a common operational plan with integrated and consolidated goals, objective, activities, targets, or budget. Notably in Brazil and Mozambique, these common plans contain an explicit goal to reduce stunting in children under 5.
- Focus on Quality of Food Consumed and Dietary Diversity: Three countries – namely Brazil, Mozambique, and Malaysia – have a focus on improving the quality of diets and dietary diversity, rather than just on increasing the quantity of food consumed. Mozambique emphasises the consumption of nutrient dense foods, particularly in the first 1000 days of life. In addition, agricultural strategies focus on contributing to more diversified diets by emphasising the production of special crops with high nutritional value.

In contrast, the focus of the DAFF and DSD in South Africa is mainly on increasing the quantity of food available with little attention given to ensuring dietary diversity or quality. In South Africa, most food parcels distributed contain starchy carbohydrates and sometimes protein, but never contain fresh fruits and vegetables to provide needed micronutrients. While household gardens are meant to facilitate access to fresh fruits and vegetables, many of these are rather used to grow maize.

- Conditional Cash Transfers (CCTs): 5 of the countries, including South Africa, provide cash transfers to alleviate poverty related to poor nutrition. In South Africa, there are currently 15.6 million social grant beneficiaries[43] [44], and social grants are meant to reduce the occurrence of hunger and extreme poverty, and also facilitate household access to basic services and economic opportunities.

In Brazil and Colombia, however, continued participation in cash transfer programmes is contingent on beneficiaries' adherence to basic health monitoring (i.e. BANC, vaccination schedule, and growth monitoring) and educational attendance. As a result of these conditions, Brazil exceeded its target of reaching pregnant and lactating women and children in the first year.

A difference between the South Africa social grant system and Brazil's CCTs is around the definition of target groups. South Africa focuses on giving grants to different types of

beneficiaries (children, disabled, old age), where Brazil targets CCTs for low income groups regardless of their age. Another difference is absence of any link between South Africa's social grants and on-going health monitoring.

DSD is presently moving away from providing food parcels for social relief and rather providing food vouchers that beneficiaries can use for any grocery purchase. These vouchers represent another form of cash transfer, but because they are not linked to the purchase of any specific food, they can be used to buy unhealthy foods (e.g. soft drinks, chips, etc.). To promote healthier food purchasing behaviours among recipients of food vouchers, the DSD could consider linking the vouchers only to the purchase of wholesome foods or to VAT-Exempt.

It is widely acknowledged that in South Africa child health monitoring services are poorly attended after the first year and that many mothers attend BANC services late in their pregnancies. With PHC re-engineering and its strategy to bring health monitoring services directly to communities and households, there is an opportunity to put health conditions on child support grants along the lines of the Brazil model, without overburdening the health system.

Moreover, linking the continued receipt of social grants to health monitoring could significantly benefit the MOH in achieving its nutrition goals by increasing utilisation of nutrition-related wellness monitoring services by key target populations. Given that 50% of children in South Africa are enrolled in child support grants (10 million of 20 million children aged 0-18), the inclusion of conditionalities to the child support grant are even more compelling. Such conditionalities would force beneficiaries to take child health (and education) more seriously, and to improve their health seeking behaviour. It would also force the health system to do a better job of health promotion in facilities and to build stronger community outreach for bringing services to those who have difficulty accessing facilities.

- Common Metrics (M&E) for tracking Food and Nutrition across all sectors and all levels of implementation: Brazil, Colombia, and possibly Malawi have a common and consolidated M&E framework for tracking both the delivery and the effects of nutrition interventions prioritised under the Common Plan. Both Brazil and Colombia have invested in Food and Nutrition Security Surveillance systems to monitors the health conditionalities of the Conditional Cash Transfers and the nutrition effects in the most vulnerable group, children age 0-5.

In South Africa, however, there are few M&E indicators for nutrition and these are department specific. There is an absence of a common and consolidated M&E Framework for the nutrition services for children U5.

Table 5. Key Elements of Food and Nutrition Responses across the 6 Countries

Element of Response	South Africa	Brazil	Colombia	Malawi	Malaysia	Mozambique
Multi-sectoral Approach (e.g. health, agriculture, social protection/development)	YES	YES	YES	YES	YES	YES
– Strengthening Family Agriculture	YES	YES	YES	YES	YES	YES
o Food purchasing programme	YES	YES				
– Income Support (social grants, cash transfers)	YES	YES	YES	YES		YES
– Food Provision (parcels, feeding schemes, peoples restaurants)	YES	YES	YES	YES	YES	YES
– School Feeding	YES	YES				YES
– Health services provision	YES	YES	YES	YES	YES	YES
Coordinating Structure for Integrating Food and Nutrition interventions across sectors	YES	YES	YES	YES	YES	NO
– Coordinating Structure above Line Ministries	NO	YES	NO	YES	PARTIAL	NO
Leadership at the highest levels	NO	YES		YES		
Conditionalities on cash transfers (social grants) tied to health-seeking behaviours	NO	YES	YES			
Common Operational Plan for Food and Nutrition across sectors	NO	YES	YES	YES	YES	YES
– Costed Common Plan / Consolidated Budget	NO	PARTIAL	YES	PARTIAL	NO	YES
Common metrics (M&E indicators / system) for monitoring Food and Nutrition efforts across sectors	NO	YES	YES	maybe		
– Nutrition and Food security Surveillance	NO	YES	YES			
Focus on Quality of Food consumed and Dietary Diversity	NO	YES			YES	YES
Strong engagement with civil society and other stakeholders in nutrition services delivery	NO	YES		YES	PARTIAL	maybe
Community-based Nutrition Services	PARTIAL			YES		YES

2.4 The Role of the Food Industry in South Africa

A wide range of private sector companies are engaged in nutrition related interventions in South Africa. But because the monitoring and evaluation of these relationships is weak, it is not possible to determine the extent of the companies' influence on food and nutrition.

Most companies that have linkages with Government and NGO nutrition services are large scale manufacturers or wholesalers ("Big Food" -- large commercial entities that dominate the food and beverage environment). Smaller privately owned food companies generally do not have relationships with Government.

In EC province, DoH respondents indicated a relationship with the food industry on products and services other than formula milk. "*We're working with companies that manufacture formula milk because they manufacture other products. We provide formula milk for those children that need it through the tender system"*, the respondent said. These respondents also indicated that formula companies organise Continuous Professional Development (CPD) activities for dieticians and nutritionists: *"Companies approach us to say what type of CDP activities we need. (But) when we work with formula companies we observe the code (International Code of Marketing of Breast Milk Substitutes)*.

Also in EC there was also mention of a formula company sponsoring nutrition training for DSD social workers. Aside from these two examples, other respondents were less forthcoming about the extent to which food companies sponsor CPD training or interacted with government managers and departments.

Relationships between Government Departments and private companies that we identified through fieldwork are described below.

SOCIAL DEVELOPMENT

Several large food companies donate food for social development activities that parallel DSD's efforts. Tiger Brands, Pioneer Foods, Woolworths, and Pick n' Pay provide significant food donations to Food Bank and/or other NGOs for onward distribution in food parcels or for soup kitchens. However, one respondent noted that these food donations were not always comprised of healthy foods. In addition, the Shoprite Group has a feeding programme that distributes more than 300 000 cups of nutritional soup and bread per month to less privileged communities throughout South Africa through its 12 Shoprite mobile kitchen units.

Tiger Brands Unite Against Hunger is an initiative of the Tiger Brands Foundation that carries out its social investments activities. Currently Unite against Hunger feeds over 100,000 South Africans each day across 7 provinces, with a particular focus on the provinces where there are Tiger Brand operations.

In the FS, Tiger Brands provides wholesaling in a form of a Private Public Partnership (PPP) to support the ECD Nutrition Programme. Food retailers and outlets such as Pick n' Pay also provide ECD centres with food.

In one district in the FS, the Community Development Unit within DSD facilitates support from Pick n Pay, Spar and Checkers to provide youth (teenage mothers) with economic opportunities.

Kentucky Fried Chicken (KFC) Add Hope provided funding to an ECD centre in the FS to purchase formula for young children at the centre, and funded nutrition training of ECD centre staff.

In 2010, EC-DSD formed a public private partnership with Nestle for improving the lives of children in ECD centres. The partnership had 3 focus areas: (1) to beautify the ECDs: i.e. fencing, painting, equipping, etc.; (2) to assist in training ECD practitioners on how to cook nutritious meals for children; and (3) to develop food security through ECD vegetable gardens.

Through this partnership, a 2-day training workshop in nutrition was conducted in November 2010 for 30 Social Auxiliary Workers (SAW) attached to ECD centres for monitoring (amongst other things) how ECD centres perform in the area of child nutritional support. This was the primary reason they were selected as the target group for the training. In addition, Nestle also provided wheelbarrows, spades and forms for gardening at ECD centres. The DSD's partnership with Nestle ended in 2012, reportedly at the urging of the Department of Health.

Food Bank South Africa (FBSA) the main coordinator of food banks in South Africa, has partnered with DSD to organise and establish food banks in communities with the highest concentration of food insecurity, with the aim of eliminating hunger and food insecurity specifically for (i) Child and Youth Development (pre-schools, foster care, shelters for orphans and vulnerable children and school feeding schemes); (ii) Adult Development (nutritional feeding centres and soup kitchens serving unemployed persons, HIV-infected persons and pregnant women); and (iii) Social Welfare (aged care, disabled care and care for the terminally ill)[45]. FBSA secures food and essential non-food groceries from producers, manufacturers, retailers, government agencies, individuals and other organisations. After removing branding from all donated products, FBSA stores them in warehouses and then dispatches them (daily) to its large networks of NGOs based throughout South Africa. FBSA attains significant economies of scale, enabling it to source and distribute very high volumes of food at a significantly lower cost than other suppliers.

ABSA supports the EC-DSD for the Orange Flesh Sweet Potato project in the EC, an initiative that empowers communities, especially women producers, to achieve economic independence and food security.

HEALTH

South Africa's recently-enacted (2012) regulations around the International Code for Marketing of Breast Milk Substitutes has limited the engagement of health professionals with infant formula companies. Health facilities have an internal policy that requires a supervisor to be called before representatives of the infant formula industry can enter a health facility. Industry representatives are not allowed to directly engage with health staff at facilities, but can approach district and provincial offices. All staff are required to be familiar with the new regulations to prevent undue influence by formula manufacturers. In the WC, by the end of 2011, 20, 000 staff had been trained on the code. Enforcement of the code and new regulations is patchy, however. Respondents in the FS stated that there is inadequate monitoring for the enforcement of the policy at health facility level except during supervisory visits (which are limited due to staffing shortages and transport constraints).

While health staff in facilities are generally not allowed to interact with food companies, pamphlets and booklets about child feeding with Purity branding were found by the researcher at one clinic in KZN.

The South African Sugar Association (SASA) is a long standing partner of the KZN DoH Nutrition Directorate. They support training of health workers, but they are prohibited to advertise their products. The most recent event where SASA and the Nutrition Directorate partnered was the training of health workers on IYFC policy.

Johnson & Johnson partners with national DoH in delivering Healthy Baby Awareness. In addition, the company supports a variety of Corporate Social Investment (CSI) initiatives, including financial, product, and technical support to the Salem Baby Care Centre in East London.

Nestlé recently entered into a formalised partnership with the Council for Scientific and Industrial Research (CSIR) within the Department of Science and Technology (DST). This partnership focuses on nutrition, food safety, and indigenous plant research e.g. rooibos. Nestlé assists with

research through sponsoring a CSIR researcher to work with scientists in Switzerland. Nestlé has strategically realigned its business to support government's initiatives with regards to MDG 4 (Reduce child mortality) and MDG 5 (Improve maternal health) focusing on pregnant women and the first 1,000 days.

Dettol supports hygiene education at community and facility levels in South Africa.

Woolworths provides dietary advice to mothers but only when mothers contact it requesting for information. Woolworths states that it does not actively give nutrition information to anyone, and only responds to direct requests for information.

AGRICULTURE

In FS, the South African Poultry Association supports Free State Department of Agriculture and Rural Development (DARD) through providing technical assistance and training to farmers in such areas as "Bulk Purchasing" and "Formation of Cooperatives" among others. Staff at provincial and district levels within DARD initiate the engagements and request training and IEC materials.

Also in the FS, Nestlé is the major sponsor for the department's Annual Competition for Women Farmer Entrepreneurs in the 5 districts. Nestlé provides cash prizes for the winner which is meant to be invested back in the business. Nestlé's Community Nutrition Programme (NCNP) strives to build capacity for women to produce their own food through vegetable gardens. The NCNP, launched in 1993, was a direct response to the challenge of hunger in South Africa.

Engen, Absa, and the Woolworths Trust fund the EduPlant programme which focusses on providing information on permaculture and cultivating self-sustainable gardens. EduPlant supported 2500+ schools to learn about growing their own permaculture food gardens. More than 360 new food gardens were started in 2012.

Tiger Brands reportedly also invests in emerging farming enterprises, although the nature and extent of this support could not be confirmed in this evaluation

Anglo-American funded the purchase and installation of Jojo water tanks for home gardens through Mzimvubu Nurseries.

NGOs

NGOs' relationships with the private sector are mainly based on receiving financial and food donations. However, one agricultural NGO mentioned that a food company purchases their agricultural products in bulk, and that this provides a ready market for their production. This relationship was built by their marketing manager and was not facilitated by any government departments.

3 FINDINGS

Generally, South Africa has a good mix of health and nutrition policies which should address the immediate, basic, and underlying factors associated with its nutrition issues (Table 3 above). Most policies and strategies from DoH, DSD, as well as the National Development Plan 2030 demonstrate some sensitivity to the nutrition needs of pregnant women and young children. However, policies from agriculture do not, as its Food Security Strategy places emphasis on food production and not nutrition or consumption.

3.1 Fit of Policies and Strategies to Context

Nutrition problems facing pregnant women and children age 0-5 in South Africa are rooted in health conditions, insufficiency of food (quantity), and poor nutrient diets (poor diversity of food). South Africa's response to malnutrition largely focuses on addressing health conditions and insufficiency of food. Little emphasis is given to policies or interventions on improving the quality and diversity of diets.

The INP is the main policy vehicle to achieve synergies in nutrition investments in the health, social welfare, and agriculture sectors. But we could not identify any INP programme documentation that specifies goals, objectives, strategic approaches, or how these will be achieved. Indeed, the INP appears to exist mainly as an approach rather than a formalised programme. Each department has its basket of interventions to contribute to INP, but they are not integrated and not always "nutrition" sensitive or sensitive to the first 1000 days of a child's life. There are no performance reviews of the INP, although performance reviews of specific interventions reportedly are carried out in individual directorates.

The "Roadmap for Nutrition in South Africa" does contain goals, objectives, and strategic approaches, but its focus is on the roles and responsibilities of the health sector only, and lacks specific description around the contributions of agriculture, social development and other sectors to broader strategic goals. Thus, the lack of an integrated INP policy, strategy, and plan limits the accountability of line ministries to achieving broader nutrition goals. An interesting finding around the Roadmap is a general lack of awareness of its existence. Only 3 respondents mentioned it during fieldwork - from national DoH, UNICEF, and the South African Sugar Association – and no provincial or district managers mentioned it as a guiding policy for their work. Indeed, one of the 3 respondents indicated:

> *"The Roadmap to repositioning nutrition in South Africa's development need to be relooked at and a decision needs to be taken on whether we continue with it or whether it should it be changed."*

In the health sector, most policies and interventions that relate to pregnant women and children under 5 are nutrition sensitive, although they do not deal with the growing problem of obesity. Otherwise, they are largely sensitive to under nutrition issues. In contrast, policies and strategies emanating from the social development and agriculture sectors are largely focused on the quantity of food with little, if any, attention given to the quality and diversity of diets. Their underlying premise is that people don't have enough to eat. Therefore their strategy is on making more food available and accessible, with little sensitivity to South Africa's growing obesity problem. Moreover, the main targets for these policies are the poor, with no further attention to pregnant women or children under 5, except for the policies around ECD food subsidies.

The 18 interventions that are the focus of this evaluation and that emanate from the policies indicated in Table 3 can be unpacked and re-grouped into 26 interventions and programmes in 4 categories along the lines of their specific focus (Table 6):

1. Improving health or expanding access to health services (15 interventions),

2. Food production for increasing the availability of food (2 interventions),
3. Access to adequate nutritious food (7 interventions), and
4. Increasing income access (2 interventions).

In each category, responsibilities for carrying out range of services lie with multiple government departments.

Table 6. Interventions and Programmes Corresponding to Different Aspects of Nutrition for children under five

Interventions and Programmes (hi priority interventions are italicised)	Responsible Department
HEALTH AND ACCESS TO HEALTH SERVICES	
Basic Ante Natal Care	DoH
Breastfeeding Support*	DoH
Mother Baby Friendly Initiative (MBFI)	DoH
Complementary Feeding Support*	DoH
Deworming	DoH
Growth Monitoring and Promotion	DoH
IMCI	DoH
Maternity Care Services	DoH
Micronutrient Supplementation for children (e.g. Vitamin A)*	DoH
Nutrition Education and Counseling	DoH
ORS and Zinc*	DoH
Prevention of Mother to Child Transmission (PMTCT)	DoH
Treatment of Severe Malnutrition in Health Facilities* and in Communities	DoH
Targeted supplementary feeding / Nutrition Therapeutic Programme for Management of Moderate Malnutrition*	DoH
Water and Sanitation; Hygiene Education	DWAF, DoH, Local Municipalities
FOOD PRODUCTION AND AVAILABILITY	
Food Security (small holder production)	DAFF, DRDLR
Household Food Production and Preservation (Household Gardens)	DAFF, DSD
ACCESS TO ADEQUATE NUTRITIOUS FOOD	
Food Fortification*	DoH
Soup Kitchens	DSD
Food Parcels	DSD
ECD Food support	DSD, DoH
Low cost Popular Restaurants	Free State DSD
School Feeding	DOE
Food Prices (zero-VAT rating)	Dept. Treasury, SARS
INCOME ACCESS AND SOCIAL EXPENDITURE	
Child Support Grants	DSD
Disability Grant	DSD

Six of the 7 “high-impact” nutrition interventions fall under the Health and Health Access category – the 7th is part of the Access to Adequate Nutritious Food category – and all are the responsibility of the DoH. An examination of each category of interventions and the extent to which they are mainstreamed and prioritised is presented below.

3.1.1 HEALTH AND HEALTH ACCESS INTERVENTIONS

Numerous nutrition-related health interventions for pregnant women and children 0-5 are governed by service-specific policies and strategies. Combined, these do address most of the underlying factors of malnutrition in South Africa. However, in some respects, there is a problems with the sheer number of service-specific policies, strategies, and guidelines in that it can lead to fragmentation of delivery during implementation. Health workers' heavy workloads means that they aren't always able to provide the full complement of nutrition services when a mother or child presents at the health facility, regardless of what is prescribed in the policy, strategy, or guidelines.

In examining the extent to which interventions are *mainstreamed* (defined as part and parcel of normal services delivery) and *prioritised* (defined as actually delivered to all or most eligible patients/clients), the evidence from this evaluation points to the fact that more "clinical" health services are far better mainstreamed and prioritised than behavioural change interventions, with the exception of certain elements of breastfeeding promotion (e.g. Mother Baby Friendly Initiative -- MBFI) which has benefited from the recent policy change and emphasis given by the Minister of Health.

Part of the problem with mainstreaming behavioural change interventions in health facilities is that they are usually delivered as group talks or through posters and pamphlets. Nurses provide limited face-to-face counseling, and whenever there is a time constraint, these are the first to be dropped. An exception is when auxiliary staff (such as peer support groups, nutrition advisors, or lay counsellors) are engaged to relieve the workload from nurses. In these cases, more behaviour change support and education of mothers occurs. But few health facilities have such additional human resources.

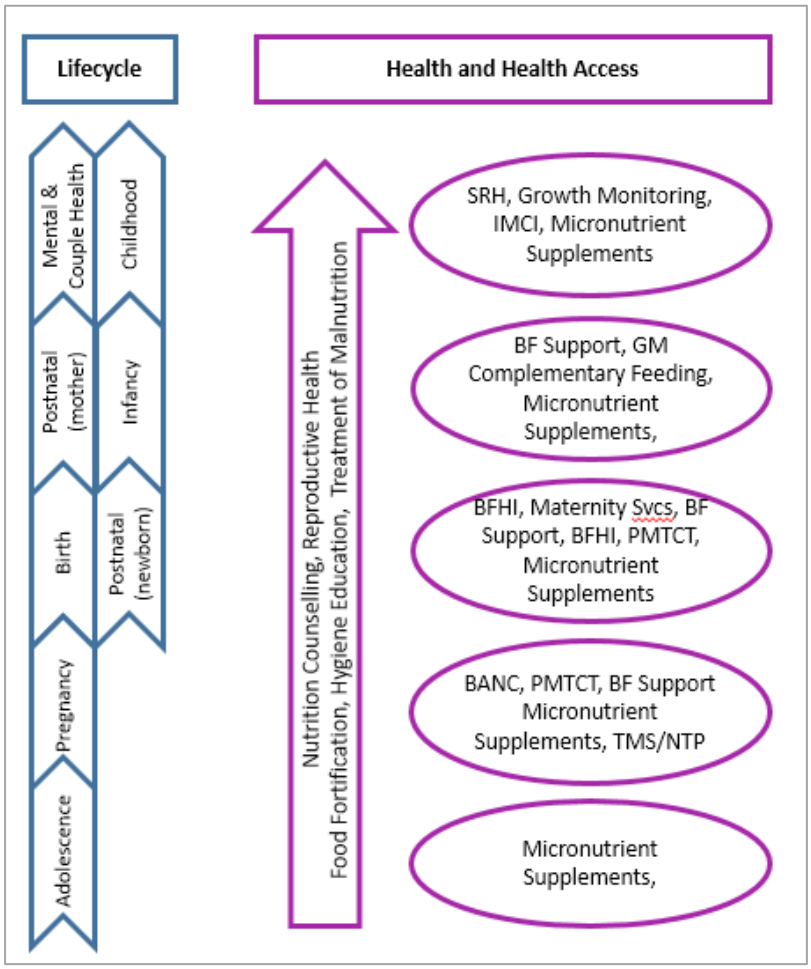
The new regulations around marketing of infant foods and milks (for enforcing the International Code on Breast Milk Substitutes) appears to be successful in eliminating undue influence of formula companies on the health sector as few respondents (11%) reported any interaction with industry representatives. In addition, MBFI initiatives in maternity wards, along with breastfeeding education in BANC, the Tshwane Declaration, and the Infant and Young Child Feeding (IYCF) policies have helped to strengthen the reach of breastfeeding messages to mothers during pregnancy and delivery.

A problem with the plethora of DoH policies, strategies, and guidelines is that they are largely programme or intervention-specific, and therefore it is incumbent upon individual health workers to determine how to consolidate them into the day-to-day health service in order to comply with each intervention's requirements. Because health workers are so busy, many of the important (but time consuming) behaviour change interventions are neglected or minimised.

One possible solution to this is to re-configure or consolidate service-specific policies, strategies, and guidelines along life cycle stages, rather than basing them by the intervention (Figure 13). This could help health workers to understand all the elements required in interacting with a client of a certain age, as well as to facilitate integration of nutrition into service provision.

Two health interventions were the focus of in-depth case studies as part of this evaluation: (i) Breastfeeding Support and (ii) Targeted Feeding Supplementation (for management of moderate malnutrition). A summary of each case study can be found on page 28 and page 30 respectively.

Figure 13. Health Interventions along the Life Cycle



Box 1: BREASTFEEDING SUPPORT Case Study

Policies / Strategies / Guidelines Governing Breastfeeding Support

- Regulations Relating to Foodstuffs for Infants and Young Children. *For marketing of infant foods and milks* (2012)
- Infant and Young Child Feeding Policy (2013)
- The Tshwane Declaration of Support for Breastfeeding (2011)
- The National Integrated Nutrition Programme – Policy Summary and Guide
- Roadmap for Nutrition in South Africa 2013-2017 (2013)
- Strategic plan for maternal, new-born, child and women's health and nutrition in South Africa 2012-2016 (2012)
- A Conceptual Framework on Human Milk Banks in South Africa (2013)
- Breastfeeding Q&A Guide (2012)
- Supplementary feeding Programme (2012)
- Clinical Guidelines: Prevention of Mother-to-Child Transmission (includes Guidelines on HIV and Infant Feeding) Revised March 2013
- Guidelines for Maternity Care in SA
- Integrated Management of Childhood Illnesses (IMCI) Handbook (revised 2011)
- BANC Basic Ante-Natal Care
- Mother Baby Friendly Initiative (no date)

Background on Breastfeeding Support in South Africa

Breastfeeding is one of the most powerful interventions for preventing child mortality and for enhancing child health. South Africa's Tshwane Declaration, along with WHO, UNICEF, and the nutrition community at large recommend exclusive breastfeeding (no other liquids or foods) in the first 6 months of life and continued breastfeeding (with other foods) until 23 months.

But breastfeeding practices in South Africa are not optimal. Although most mothers start breastfeeding at birth (more than 90% of new-borns are breastfed at delivery), many are "mixed feeding" their babies in the first two months of life. By 6 months of age only 2% of babies are exclusively breastfed with infants receiving other foods and fluids at an average age of 4.2 months. At 23 months of age only 13% of children are still breastfeeding. This is significantly less than the recommendations.

Resources Available for Breastfeeding Support

Financial resources directly attributed to breastfeeding support cannot be determined separate from financial resources allocated to nutrition or district health services of the DoH.

A shortage of human resources for delivering education about breastfeeding were noted by 58% of respondents at health facilities. Nurses' heavy workloads mean that they provide limited face-to-face counselling, and whenever there is a time constraint, this is often dropped.

Institutional Arrangements for Implementation

DoH implements breastfeeding support through its primary health care and maternity services. No other government department is formally engaged in this intervention, although in EC, DSD social workers at community level are meant to promote breastfeeding.

Institutional Capacity for Breastfeeding Implementation

The DoH has sufficient institutional structures to implement Breastfeeding Support at national, provincial, district, and local levels. Integration of Breastfeeding education and counseling into BANC, Prevention of Mother to Child Transmission (PMTCT), maternity, and post-natal services is an implementation strength. However, in these services and through the Mother Baby Friendly Initiative (MBFI) in hospitals, the focus is largely on building awareness of the importance of breastfeeding (i.e. "selling" breastfeeding to pregnant mothers). After birth, the quality of breastfeeding promotion is compromised due to nurses' weak knowledge and 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. Training of health workers on breastfeeding is inconsistent across the provinces.

Staff shortages at health facilities have created heavy workloads for facility staff, and this often compromises the quality of the interventions' delivery. 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.

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.

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 programmes and that nutrition is forced to compete with other programmes for resources.

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

Breastfeeding Linkages, Referrals and Partnerships

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.

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.

Beneficiary Views

Messages about exclusive breastfeeding in the first 6 months of life appear to be well known by all respondents and beneficiaries. Indeed 77% of beneficiaries report having been told about the importance of exclusive breastfeeding in the first 6 months of life, but few beneficiaries admit to following this advice, largely due to entrenched social and cultural influences. This suggests that the behaviour change counselling is either not effective or is not continuous enough to support sustained behaviour change, indicating that the policies and strategies have not successfully overcome these.

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 exclusive and prolonged breastfeeding, communication is needed for behaviour change rather than awareness building.

There is a need to mitigate factors that prevent mothers from breast feeding e.g. provision of donated breast milk; provision of breast pumps to mothers of infants who have to go back to work or to school.

Box 2: TARGETED SUPPLEMENTARY FEEDING (TSF) Case Study

Policies /Strategies Governing TSF

DoH guidelines governing infant and child health recognise the link between malnutrition, child health and survival, and infant and young child feeding for reducing morbidity and mortality in this age group. Furthermore, the link between malnutrition in pregnant mothers and poor birth outcomes is also recognised. In August 2012, the DoH issued the following specific guidelines for this intervention: The South African Supplementary Feeding Guidelines for at Risk and Malnourished Children and Adults.

Institutional Arrangements for Implementation

The DoH is the lead department responsible for the implementation of TSF. Most respondents (except for those from EC province and one district in the FS) indicated that the intervention has the necessary leadership (and champions) required at provincial, district and facility level to enable effective implementation. In the WC, FS (one district) and KZN, there were positive views of dieticians and nutrition managers as the champions for this intervention. However, EC-DoH respondents cited insufficient strategic leadership for nutrition generally.

No formal mechanisms exist at the national, provincial and district levels between the DoH and other government departments, such as DSD and DAFF, for strategically coordinating assistance to TSF patients. At the local level, however, there are more instances of coordination and referral.

Background on TSF in South Africa

The Targeted Supplementary Feeding (TSF) programme is a nutrition intervention designed to manage moderate malnutrition and prevent severe malnutrition among children and adults alike through dietary management based on the optimal use of locally available foods to improve nutritional status. In South Africa, the TSF programme is integrated within other health services such as Basic Antenatal Care (BANC), Anti-Retroviral Therapy (ART), Tuberculosis (TB), and Integrated Management of Childhood Illnesses (IMCI) delivered in Primary Health Clinics (PHCs), Community Health Centres (CHCs), and hospitals, and through mobile clinics in more remote areas (e.g. EC).

Resources Available for TSF

There are differing perceptions among national, provincial and district respondents regarding the adequacy of funding for TSF, with half indicating that funds were sufficient, and the other half claiming that funds are insufficient. The latter view was more often expressed for district level. Views on the adequacy of human and financial resources differed by province. KZN respondents reported having enough human, financial and material resources to implement the programme, while FS and EC both reported province-wide financial and human resources constraints. WC also reported not having adequate staff to effectively implement this intervention.

Implementation Model and Coverage of TSF in South Africa

TSF is a rehabilitation programme for undernourished individuals and is intended as a short-term intervention with specific entry and exit criteria. It entails the provision of food supplements according to age-specific needs and disease-specific conditions.

As currently practiced in South Africa, TSF is a health facility-based service with dieticians primarily responsible for entry and exit into the programme and nurses handling the ongoing management of beneficiaries. However, some provinces have started using CHWs or CCGs for identifying, referring, and following-up underweight children and pregnant and lactating mothers (EC, KZN). CHWs/ CCGs also give talks to communities on nutrition and advice to mothers on food preparation.

Institutional Capacity for Implementation

The TSF intervention is mainstreamed into the regular health services delivered at the facility level. Good standards and norms guide the implementation of this programme.

TSF is nutrition sensitive to children under 5 and pregnant women but is heavily dependent on patients coming to the clinic to be screened and enrolled in the programme. As a result, barriers that generally affect utilisation of facility-based services e.g. distance and means of transport, also directly affect uptake of this intervention.

Staff shortages have contributed to poor nutrition counseling and the attendant confusion about the intervention's entry and exit criteria.

Poor growth monitoring at the facility e.g. poor quality of recording, plotting and interpreting growth due to a combination of heavy workloads and poor skills has led to under-enrolling of moderately malnourished children for the intervention. This points to either the need for more training/supervision of nurses or the need for more manageable workloads.

Supply management is an issue with some provinces experiencing frequent stock outs of food supplements. While 91% of the facilities evaluated had stocks of food supplements at the time of the evaluation, 42% reported experiencing stock-out in the preceding 6 months. It should be noted that only 70% of the health facilities in the Eastern Cape had stock on the day of the visit compared to 100% availability at the health facilities in the other three provinces. None of the facilities visited in the four provinces had expired food supplements.

There is a need for better M&E of this intervention at the activity, output and outcome levels. Currently, there is poor data on what has been delivered and no data on how long individuals are enrolled in the intervention. Also, the indicators reported on do not distinguish between newly enrolled patients and those who've been receiving the intervention on an ongoing basis.

At the strategic level, there is no coordination between DoH, DSD and DAFF or their counterparts in the provinces or at district level and very limited coordination at the local level. Data regarding vulnerable groups are kept in departmental silos. There is a need for this to change and for departments to share data on vulnerable individuals/households and coordinate their responses in a holistic manner.

Overall, while TSF is being implemented as envisioned, it is limited by the poor quality of growth monitoring and promotion, monitoring and evaluation of delivery, and lack of linkages with community based services/structures.

Linkages, Referrals and Partnerships

Except for KZN, there are limited referrals between the different government departments. Malnourished individuals are not regularly referred to DSD's Food Access programmes and the household connected with DAFF's Food Security programmes.

There are weak linkages with community based social service providers e.g. NGOs, CHWs/CCGs, faith-based organisations.

Some communities refer to the food supplements as "AIDS Pap" due to its association with HIV/AIDS patients.

Beneficiary Views

Although many mothers stated they would take their children to the local clinic in cases of no weight gain, their inability to recognise the signs of poor growth leads to delayed care seeking. Some provinces address this lack of knowledge through awareness building activities using mass media and CHWs/CCGs.

Beneficiaries have some reservations about the actual nutrition supplements used in the TSF intervention. Some communities associate the "porridge" provided as part of the TSF Programme with HIV/AIDS patients while others do not like the taste of the supplements.

3.1.2 FOOD PRODUCTION AND AVAILABILITY

Only two nutrition interventions are concerned with Food Production and Availability: Food Security (small holder production), and Household Food Production and Preservation (Household Gardens).

The DAFF's Food Security Programme aims to expand agricultural production among existing smallholder and subsistence producers for generating sustainable incomes through farming. Implementation of the Food Security programme is currently being refined through a collaboration with DAFF/DRDLR and the provincial Departments of Agriculture and a linkage to the Ilima/Letsema Programme[46]. The focus of the Food Security programme is not on addressing nutrition per se, but on building agricultural production capacity among small holder farmers and subsistence farmers. The main inputs of the programme are agricultural implements and infrastructure for "improving production systems of subsistence, smallholder and commercial producers in the agriculture, forestry and fishery sector to achieve food security livelihoods". There appear to be no nutrition education objectives or activities that are delivered as part of this programme, nor is there any targeting of households with pregnant women or small children.

An example of nutrition-led agriculture in Brazil might be of interest to South Africa. Brazil has established a programme that links food distribution with targeted purchases from farmers who otherwise would face difficulties in accessing markets. The programme buys food items exclusively from "family farmers" and then offers them to vulnerable populations. This strategy has been shown to strengthen short supply chains that promote nutritious diets (since they ensure access to a variety of quality food) and provide important market opportunities and sources of income for suppliers.

In the past, Home Gardening interventions were spearheaded by the DAFF, but the department's new sector strategy reveals that this is no longer a focus, and that they now work to increase the profitability of agricultural activities among small holder and subsistence farmers. DSD now assumes responsibility for promoting home gardens as part of its Sustainable Livelihoods Initiative. However, because we were unable to obtain any policy, strategy, or programme documentation around the initiative, it is not possible to determine the extent to which the programme is sensitive to nutrition, mainstreamed or prioritised. However, a few respondents observed that it is mainly the elderly who participate in home and community gardens, and that there is a poor uptake of home gardening interventions, due to poor follow-up by staff after seed distribution, a preference for buying food rather than growing it, or small plots that make it difficult to grow gardens.

Household Food Production and Preservation was the focus of in-depth case studies as part of this evaluation. A summary of this can be found on page 37.

Box 3: HOUSEHOLD FOOD PRODUCTION AND PRESERVATION Case Study

Policies /Strategies Governing HFPP

The Integrated Food Security Strategy (IFSS) created in 2002 is the main document to guide and inform Food Security interventions, including household food production and preservation and home gardens. The Zero Hunger programme was conceptualised, to strengthen the impact of IFFS and a draft Food Security and Nutrition Policy for South Africa is in process.

No policies specifically govern household food production and preservation; however various documents guide its implementation.

Institutional Arrangements for Implementation

DAFF has stewardship over food security for the South African government, but the Directorate for Food Security has no authority to compel other DAFF directorates or other government departments, to fall into line with the Food Security Strategy. Within DAFF, multiple levels are responsible for implementing Food Security activities, but there are no clearly defined linkages between these levels.

In addition, the DSD recently launched its Sustainable Livelihoods programme which also promotes home gardening. There is little evidence that DSD's and DAFF's efforts are coordinated, however.

At national level, DAFF leads the Integrated Food Security and Nutrition Task Team comprised of DRDRL, DSD, DoH, and DOE representatives. However, there are no indicators that integrate the work of the agriculture sector with the work of other sectors for which the IFSS and the overall nutrition effort can be measured.

Background on HFPP in South Africa

"Household Food Production" is one element of South Africa's Zero Hunger Strategy and is part of the Food Security services. The focus is on supporting food production at a household level for both onward sale and household consumption as a means to achieving food security and zero hunger.

In the past, Home Gardening interventions were spearheaded by the DAFF, but the Department's new sector strategy reveals that this is no longer a focus, and that they now work to increase the profitability of agricultural activities among small holder and subsistence farmers. DSD now assumes responsibility for promoting home gardens as part of its Sustainable Livelihoods initiative.

Resources Available for HFPP

Many agriculture respondents consider the primary constraint to implementing Food Security not to be budget, but human capacity. Indeed, most provincial agriculture departments have many vacant Food Security posts that inhibit implementation. The Food Security budgets at national and provincial levels have also declined in recent years further hindering implementation.

No information on DSD's funding or HR capacity for home gardening could be obtained.

Implementation Model and Coverage of HFPP in South Africa

DAFF Household Food Production, Food Security and Starter Packs Project provides relief measures to households and beneficiaries severely affected by food insecurity and price escalation of basic food items. The project provides agricultural input and equipment for household food production.

DAFF Special Programme for Food Security Projects (SPFS) and the National Food Emergency Scheme (NFES) promote home gardens (backyard mixed farming) and where appropriate, school gardens and urban agriculture, using sustainable technologies and encourage sustainable use of underutilised and unused resources.

Little information was available on DSD's Sustainable Livelihoods programme, other than the fact that it supports food production as one element of increasing food access to food-insecure populations.

Institutional Capacity for Implementation

There is no evidence of any standard norms or guidelines for implementation of household food production, and each province has a different approach to promoting household food production:

- The KZN Department of Agriculture and Environmental Affairs (KZN-DAEA) has a "One Home One Garden" Campaign to promote a culture of household vegetable production for enhanced food security at a household level. KZN-DAEA provides training on vegetable production.
- The EC-DRDAR provides food insecure households with access to small pieces of land for gardening. The main target are DSD beneficiaries of Food Access interventions and physically challenged people.
- The WC-DOA's Food Security Programme uses extension and food security officers as well as community agricultural groups, and CHWs to promote home and community gardens.
- The Free State Department of Agriculture and Rural Development (FS-DARD) promotes home gardens through extension officers and food security officers. Beneficiaries are identified through community and household profiling.

There is no evidence, however, of any programme supporting households in food preservation for securing the food supply beyond the harvest season.

A shortage of well-trained managers and field extension officers in nearly all provinces inhibits HFPP implementation. In addition, few if any staff have any training in nutrition.

Some provinces use mass media and other strategies to promote home gardening to the general public, such as community profiling events, local radio, campaigns, and community workshops.

Effective M&E systems are lacking. There is an absence of standardised measures of food security, and regularised ways of collecting and reporting them at provincial, district, and local levels. Various M&E approaches are carried out at district and provincial level, but none track food preservation activities, or track the intervention's effects in terms of enhanced food consumption or nutritional status.

Linkages, Referrals and Partnerships

DAFF, DRDRL, and DSD each promote household gardens but there are no standardised or well-defined referral and linkage structures, especially at national and provincial levels for coordinating implementation to achieve maximum effects

Some provinces use other structures (e.g. CCGs, NGOs, Community Based Organisation -- CBOs, Community projects, etc.) to promote household food production. However, none of these operate at scale and none specifically target households with pregnant women or children U5.

Nevertheless, interactions between departments and with NGOs and the private sector appear to work fairly well at local levels in some provinces.

"South Africa's perspective on indigenous foods/knowledge systems has decreased or is low compared to other African countries. One factor is the maize-focus of consumers. Another is the fact that many of the poorest households would rather sell their labour than produce food, in part because of the lack of profitability of farming." -- National DAFF respondent

Beneficiary Views

There is little information available on the current coverage or uptake of home gardens in South Africa, although government managers at district and provincial levels report that there is generally weaker uptake in peri-urban areas compared to rural areas.

Beneficiaries' awareness of the home gardening programme was quite high in EC and KZN, but much lower in WC and FS. Nevertheless, few beneficiaries outside of KZN and EC reported that they have a home garden.

3.1.3 FOOD ACCESS – ACCESS TO NUTRITIOUS FOOD

Several interventions are concerned with Access to Nutritious Food and these involve multiple government departments or agencies. Most of these interventions are mechanisms to provide additional food into people's diets (e.g. soup kitchens, food parcels, ECD food support, and in the Free State, low cost popular restaurants).

Generally, there is a lack of policies governing food access interventions and largely there is an absence of nutrition guidelines, although the ECD programme has menu guidelines provided by DoH. The DSD's food parcel programmes appear to focus more on quantity of food, rather than nutritional quality and this is most likely due to a lack of guidelines around the composition of food parcels and soup kitchens. Some parcels include numerous unhealthy processed foods (e.g. soft drinks, chips, energy bars and drinks) which have no place in any nutrition-related intervention. Soup kitchens, on the other hand tend to have more focus on a balanced meal plan.

Most DSD Annual Reports at national and provincial levels indicate the number of parcels distributed, but not the number of people reached or whether pregnant women and children under 5 were beneficiaries. Moreover, DSD has clearly noted that it finds the management and logistical costs associated with food parcel distribution to far exceed that of food vouchers. As such, DSD has indicated its desire to scale back on food parcel distribution and substitute it with food vouchers or other cash transfer mechanisms.

Two other Food Access interventions concern Food Prices (taxing or zero-VAT ratings of foods) and Food Fortification. 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 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

It is unclear if the zero-rating of basic foodstuffs is an effective policy tool in ensuring the intended poverty-alleviation benefits really reach poor households[47]. This is because rich households benefit from the zero-rating as much as poor households.

Another food price intervention has been recently proposed by the DoH[48] to reduce the risk factors associated with obesity and non-communicable diseases by encouraging greater consumption of affordable nutrient-rich, fibre-rich foods and green leafy vegetables. This involves taxing undesirable processed foods and, at the same time, exempting healthier choices from taxation, as well as reducing the advertising of junk food to children during child-related TV time.

Finally, Food Fortification is a Food Access intervention that was initiated in response to the 1999 National Food Consumption Survey which found a high prevalence of micronutrient deficiencies in women and children. Regulations require the inclusion of essential micronutrients (Vitamin A, several B vitamins, folic acid, iron, and zinc) into common staples such as maize meal, wheat

flour, and bread. These regulations apply to "*any person, or company which manufactures, imports, or sells maize meal and wheat flour and foodstuffs that contain 90% of either maize meal or wheat flour, such as bread*"[49]. Given the mandatory nature of this regulation, all food manufacturers are required to comply; however, monitoring and enforcement has proven difficult, especially with regards to compliance by small millers. This is problematic for those living in rural areas who are more likely to suffer from micronutrient deficiencies, and who also grow their own maize and have it milled locally, or purchase locally grown and milled maize. Even with larger companies, compliance has been fraught with irregularities. The implementation of food fortification has been credited with reducing neural tube defects associated with Folic Acid deficiency in mothers[50]. However, iron and vitamin A deficiencies have not been effectively addressed by fortification[51]. This may be due to the fact that 60% of vitamin A is lost during cooking, due to the instability of the prescribed fortificant (i.e. premix added to flour or meal)[52]. These issues require further attention as food fortification is a key food-based approach for addressing the high levels of micronutrient deficiencies among South African children.

Food Access (food parcels and soup kitchens) was the focus of in-depth case studies as part of this evaluation. A summary of this can be found on page 37 (Box 4).

3.1.4 INCOME ACCESS AND SOCIAL EXPENDITURE

As discussed in section 0 above, South Africa's various social grants are not nutritionally targeted, but are poverty-targeted, and there is a general absence of any linkage to nutrition and health monitoring. However, these interventions were not a focus of this evaluation, but are mentioned here to highlight their potential to contribute to the INP.

Box 4: FOOD ACCESS Case Study

Policies /Strategies Governing Food Access

Various policies were mentioned:

- Social Service Professions Policy,
- Regulations for Social Work Supervision
- Children's Amendment Act
- The ECD guidelines
- SACCSA Policy Guidelines for Course of Conduct
- Code of Ethics and the Rules for Social Workers
- Framework for Social Work Supervision
- Older Person's Act
- Children's Act
- The Social Assistance Act
- Social Service Professions Act 110 of 1978
- The Social Relief Guidelines
- The Sustainable Livelihoods Programme

Institutional Arrangements for Implementation

DSD is the main organisation responsible for Food Access on a national, provincial and district level. They determine policy, but also identify hungry households. Ideally they should coordinate with DAFF and DoH to ensure the intervention is correctly delivered. There appears to be a lack of coordination and linkages between government departments at a strategic level, however. This reiterates the fact that respondents often lacked a "big picture" understanding of the department's Food Access interventions. This can be seen through the silo'd nature of such as food parcels, soup kitchens, ECD support, and social grants.

Background on Food Access in South Africa

Access to food is addressed through a wide range of different interventions in South Africa, namely Food Parcels, Monetary Food Vouchers, Soup Kitchens, Sustainable Livelihoods interventions, and support to ECD Centres for meals.

Sustainable Livelihoods is an intervention involving home gardening and production of food.

In 2009, the "Food for All" initiative was introduced to acquire and distribute basic foods at affordable prices to poor households and communities through the methods mentioned above. These are delivered independently of each other.

Resources Available for Food Access

DSD is responsible for delivering Food Access interventions. However, there are no separate budgets items in the APP, making it difficult to determine how much money is allocated to each intervention.

Most respondents across the four provinces considered financial resources to be generally adequate. Human resources were in short supply for DSD generally, and respondents also noted a lack of food and nutrition training for existing DSD staff.

Implementation Model and Coverage of Food Access in South Africa

DSD staff at district and local levels are focused on diagnosing hunger and vulnerability, thus identifying potential recipients of Food Access interventions. The delivery of these interventions is largely through NGOs that deliver the food parcels/soup kitchens. Food Banks are used as a mechanism to support delivery of food to poor household, particularly in the processes of procurement, storage, and distribution.

However, DSD is reaching only a fraction of the vulnerable households in the country. Coverage rates vary across provinces, and coverage of ECD is also low. SANHANES found 26% of households nationally are rated as hungry. In the WC this number is 16%, and in the EC 36%. But DSD data from its annual report indicates it has profiled only 11% of these and has assisted 5% of these with Food Access and Sustainable Livelihoods services.

Institutional Capacity for Implementation

Various factors limit implementation of Food Access interventions –a gross shortage of human resources, limited inter-departmental linkages and coordination, no standardised protocols for implementation, no standardised delivery mechanisms, and no standardised M&E.

There is a shortage of social workers across the country, with a need for a further 70,000. Social Work Coordinators are particularly scarce in WC, spurring the province to engage NGOs to support ECD centres. Although this partially addresses the referral role of the social work coordinators, it doesn't completely fill the need (or the gap) for oversight and monitoring.

National level respondents from SASSSA and DRDLR both expressed dissatisfaction with internal communication, and in the FS, DSD also spoke of insufficient feedback about implementation from lower levels to higher.

Planning for food access interventions is also inconsistent across the four provinces. Most DSD respondents (75%) reported that there was an efficient management process for measuring the effectiveness of the delivery of Food Access interventions at service delivery point, but this was more commonly cited by respondents from KZN and (to a lesser degree) FS. However, there is a need to develop more accurate, reliable, and comprehensive data on Food Access interventions, disaggregated to local level to assist planning and targeting.

Further, no one was able to provide any details around the prescribed composition of the food parcels. The quality of food, nutritional content and freshness of the food in parcels thus could not be determined.

Linkages, Referrals and Partnerships

Coordination at implementation level is also weak for Food Access interventions. Ideally, DSD should identify hungry households, and coordinate with DAFF and DoH to ensure that the appropriate interventions are implemented. These include immediate access to food through parcels, health concerns addressed from DoH and Sustainable Livelihoods introduced by DAFF to ensure a more long time solution to hunger. However, this rarely happens.

DSD undertakes little strategic coordination with DoH or DAFF but does work closely with SASSA. Referrals at local level are stronger than at higher levels. There is little evidence of referrals and linkages in the EC, contrary to KZN, which has strong referral systems. Partnerships with NGOs do exist all around, but there is no programme documentation to understand the process further. Some partnerships exist with the private sector, although these were also not discussed.

"Food availability and access by themselves (do) not translate into a well-nourished population; hence nutrition awareness and education coupled with socio-economic programmes are integral to the improved health status of the South African population. Awareness moves the individual from lack of interest and ignorance to an increased appreciation and finally to action."

- Special Adviser to the Minister of Social Development

Beneficiary Views

DSD uses several channels to raise awareness among the general public (including road shows, awareness campaigns, radio advertisements, community referrals, and CHWs) that are considered adequate. In 2012, the DSD's Sustainable Livelihoods Programme successfully organised a campaign to "take DSD to communities" for distribution of food parcels by soup kitchens and food banks.

In KZN, soup kitchens, food parcels, and food voucher programmes were not widely known, whereas beneficiaries in EC were aware about food in ECD centres, social grants, and food parcels. These results suggested that DSD could invest more in promoting Food Access programmes to increase awareness among and access for potentially eligible beneficiaries.

3.2 Resource Allocation

One of the differences between South Africa's INP and the successful nutrition programmes in other countries is that in SA there is a lack of a consolidated and dedicated budget and staffing for nutrition activities across all sectors. Analysis of resources allocated to nutrition in South Africa is compromised by the inability to disaggregate the value of staff time and material inputs for nutrition apart from larger health, agriculture and social development budgets and staff complements. Therefore, the analyses presented below most likely underestimates the amount of resources allocated to nutrition, particularly in the health sector where the bulk of nutrition interventions are delivered by nurses and other health staff as part of normal PHC services. National Treasury is about to undertake an expenditure review on nutrition which will help to answer this question.

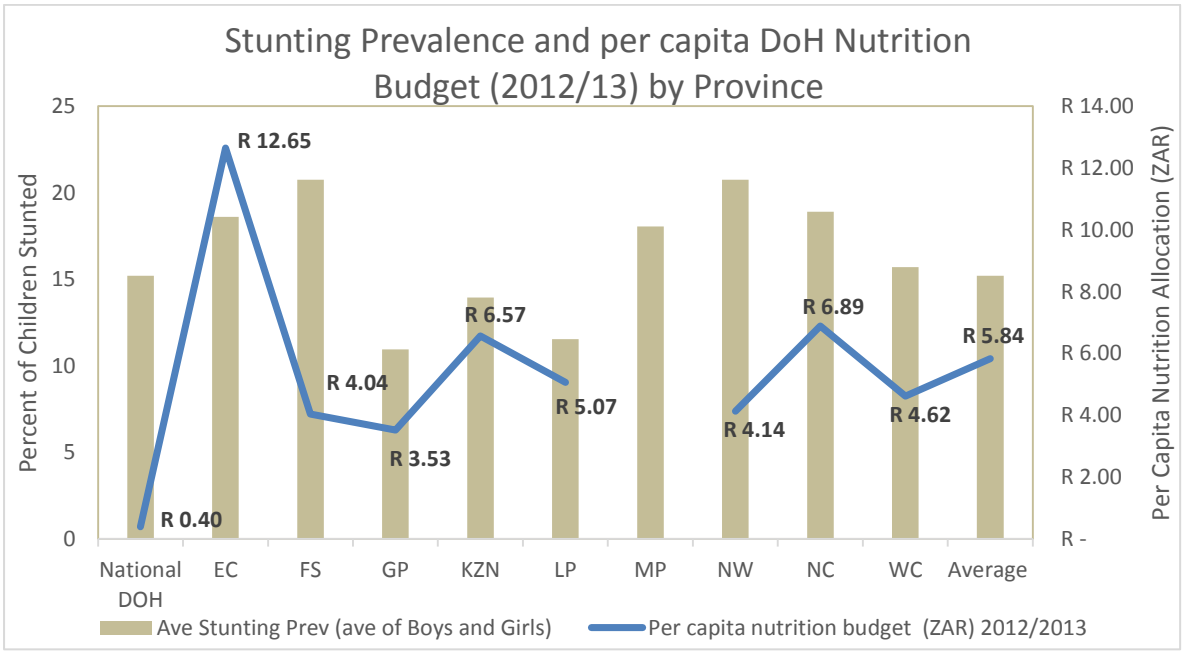
3.2.1 Budget / Funding Analysis

While nearly all nutrition interventions are integrated into other government programmes, they may or may not have their own separate budgets, and indeed, funding for the 18 nutrition interventions is largely integrated into larger budget line items, it is nearly impossible to determine the amount of funding being provided for nutrition. For example, many staff in DoH, DSD, and DAFF are responsible for incorporating nutrition education and other services, but the portion of their time allocated to nutrition is not determined. Likewise, it is not possible to separate agricultural input costs from other nutrition interventions in the food security line item of Agriculture budgets; nor is it possible to determine the food access costs in DSD budgets.

In DoH budgets, there are line items for nutrition, but it is not clear if this is only for the cost of supplements or if it also covers other activities. Lack of disaggregation makes it difficult to hold departments accountable for spending or budgeting on nutrition and achieving goals.

In comparing per capita DoH nutrition budgets with child stunting prevalence (Figure 14), it is clear that there is no correlation between the magnitude of the stunting problem in children and the amount of nutrition funding allocated.

Figure 14. Stunting Prevalence and per capita DoH Nutrition Budgets (2012/13) by Province[53]

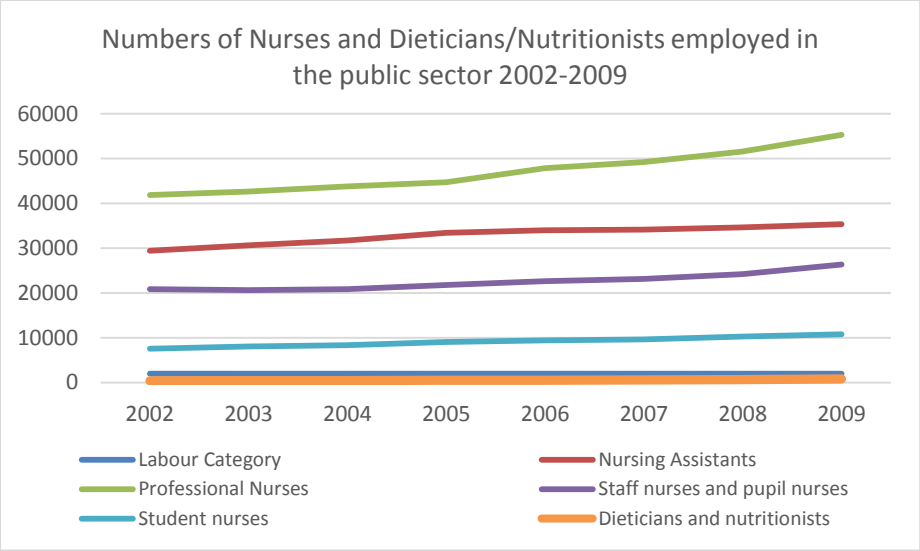


3.2.2 HUMAN RESOURCES

Nurses and dieticians/nutritionists are responsible for delivering nearly all nutrition interventions for the health sector. However, due to the shortage of professionally-trained nutrition staff in the health system, there is a great dependence on nurses to implement the DoH's complement of the 18 nutrition interventions.

Trends in employment over the last 10 years (Figure 15) show that the number of health workers has remained fairly stable at around 180,000[54], although the composition of the health force has altered, with nurses accounting for 72% of the workforce in 2009, compared to 67% in 2002. However, the number of dieticians and nutritionists has remained relatively stable at approximately 0.4% of the health workforce.

Figure 15. Employment trends in Nurses and Dieticians/Nutritionists in the Public Sector[54]



The numbers of staff employed only tells part of the story, however. In 2010 there were 36 nurses per 10,000 population compared to 0.16 Dieticians/Nurses per 10,000 population – or to rephrase, 236 nurses for every 1 Dietician or Nutritionist (Table 7).

Table 7. Numbers and Coverage of Nurses and Dieticians/Nutritionists (2010)[54]

Labour Category	Number of Staff (2010)	Number per 10,000 population (2010)
Nursing Assistants	56 039	11.42
Professional Nurses	93 049	18.97
Staff nurses and pupil nurses	31 395	6.4
Subtotal	180 483	36.79
Dieticians and nutritionists*	763	0.16
Ratio Nurses: dieticians/Nutritionists		236.54

Provincial differences in numbers and coverage are evident. While GP, WC, KZN, and LP have the highest overall numbers of dieticians and nutritionists (Figure 16), the coverage per 10,000 population is greatest in NC, LP and FS due to their more sparse populations (Figure 17).

Interviews at national level indicated that many dieticians and nutritionists are reportedly located in urban areas and work in hospitals and private health facilities rather than in public-sector Community Health Centres (CHCs) and PHCs where the bulk of nutrition services are meant to

be provided. However, this could not be confirmed with existing data from the Department of Health.

The above data does not reflect the growing use of Community Health Workers (CHWs) and Community Care Givers (CCGs) in extending the reach of PHC and nutrition interventions to households and communities. Indeed, in KZN, where these cadre of health workers are extensively used, nutrition interventions appear to be implemented relatively well, especially for the interventions requiring extensive counseling, support, and education. This could be partly due to the strong partnership between the DoH and the University of KZN.

In the Agricultural and Social Development sectors, nutrition services are meant to be provided by food security personnel and social workers, respectively. However, employment figures for these staff are not readily available. In its most recent annual report, DAFF noted that there were 248 posts established for food security, but that there were "vacancies owing to natural attrition".

Figure 16. Total No. Nutritionists and Dieticians by Province (2010) [54]

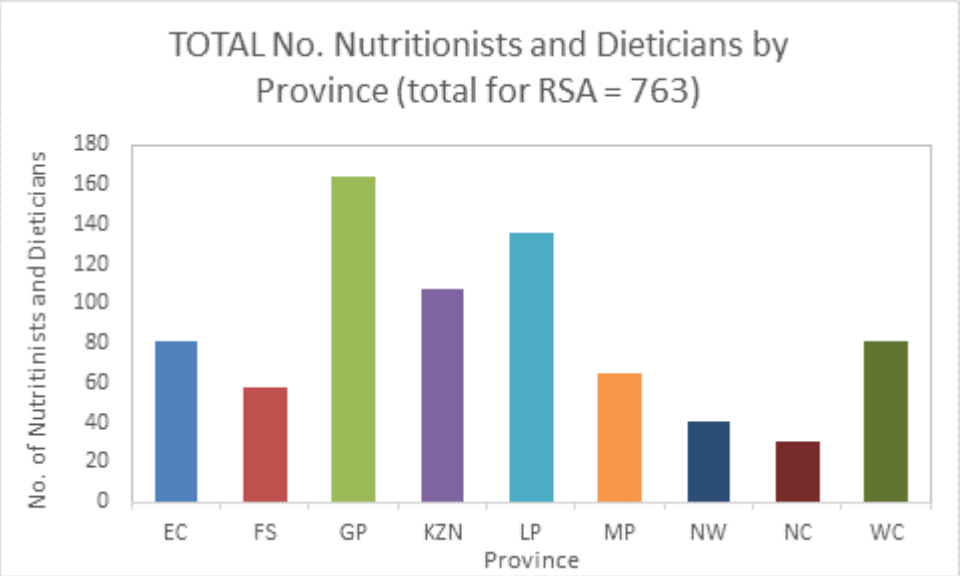
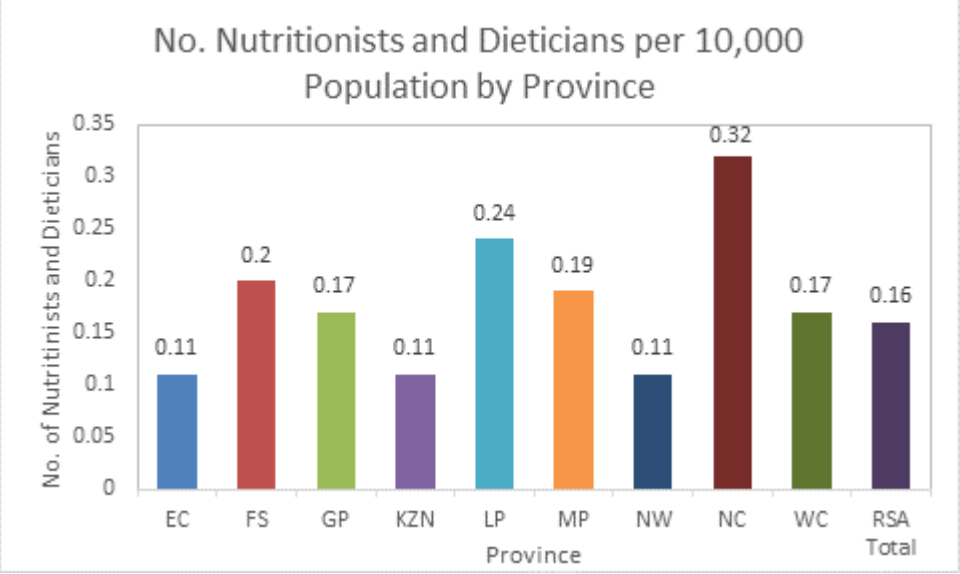


Figure 17. Number of Nutritionists and Dieticians per 10,000 population (2010)[54]



We were unable to obtain any staffing norms for nutrition in the four provinces where we conducted fieldwork, but across all sectors and provinces, many respondents reported staff shortages that they believe inhibit implementation of nutrition interventions.

3.3 Implementation Model(s)

The World Bank[55] notes the importance of the following key elements for national nutrition models:

Table 8. Key Elements for National Nutrition Models

KEY ELEMENTS OF NATIONAL NUTRITION MODELS	EVIDENT IN SOUTH AFRICA?
INTEGRATED SERVICES: Because nutrition is not a sector, but contributes to the activities and outcomes in a variety of sectors, nutrition services need to be integrated into existing sectoral programs and build on existing institutional capacity.	**YES** - for the most part, nutrition services are integrated into existing health, social development, and agriculture programmes.
SOUND MANAGEMENT SYSTEMS Giving attention to the detailed micro-level design of systems for targeting program clients and selecting, training, and supervising staff	**PARTIALLY** - within the health sector, there is relatively clear targeting and training of staff. However, in the social development and agriculture sectors, this is not evident.
COMMUNITY INVOLVEMENT: Involving and, as far as possible, empowering communities through well-planned communication programs and giving them a role in designing, monitoring, and managing nutrition services.	**NO** – nearly all nutrition interventions are controlled by government to communities. Communication to the general public around nutrition is also weak
SOUND M&E SYSTEMS that focus on both delivery of nutrition interventions as well as the effects (i.e. outcomes or results).	**PARTIALLY** – some useful indicators exist for health-based interventions, but there is a dearth of nutrition indicators related to social development and agriculture, and there are few to no routine indicators around nutrition effects. There is no common indicator (e.g. stunting) whereby all departments can measure their contributions to the goals of the INP.
ENGAGEMENT OF NGOS/CBOS for extending the reach of interventions, particularly at community level	**NO** – there is very little engagement of NGOs in delivery of nutrition services, except in KZN, where NGOs are actively engaged in OSS.
EFFECTIVE OVERSIGHT FROM A COORDINATING OR MANAGING BODY that has no implementation responsibilities, and that can influence inter-sectoral resource allocation.	**NO** – although there are numerous coordination mechanisms, including clusters, they are all comprised of implementing departments.

3.3.1 DELIVERY CHANNELS

A main research question under this evaluation concerns the type and sufficiency of implementation models used for the 18 nutrition interventions. We identified 6 main delivery channels:

1. Facility-based delivery
2. Community-based delivery by government personnel
3. Community-based delivery by NGOs/CBOs
4. Peer Support Groups

5. Commercial or other
6. Linkages with other government services

Table 9 summarises the extent to which these delivery channels are used for the 18 nutrition interventions, and a clear pattern emerges for health sector interventions. The more clinical nutrition interventions that are provided during episodes of illness or pregnancy are extensively delivered in health facilities (e.g. Management of Malnutrition, BANC, IMCI, etc.). For some of these interventions, community-based delivery also occurs, through campaigns (for Vitamin A, deworming, etc.), or through the use of CHWs at community level, although the evidence for these is somewhat limited.

In contrast, where the health intervention involves the delivery of education/counseling to otherwise healthy clients, there is evidence of less intensive delivery at health facilities. While one would expect that the DoH would prioritise community-based delivery channels for ensuring the delivery of these interventions – either through community-based government staff or NGOs – there is unfortunately little evidence of this currently, although it is recognised that PHC reengineering is designed to address this gap.

DSD and DAFF nutrition interventions are delivered mainly at community-level by government staff, and use few other delivery channels.

Across the 18 interventions, there is evidence of insufficient use of peer support groups and partnerships with NGOs to strengthen implementation and expand the reach to community level. The exception to this is the DSD's use of NGOs to deliver soup kitchens and food parcels, and DoH's establishment of peer support groups for breastfeeding support, especially for PMTCT.

One possible explanation for the limited engagement of NGOs and CBOs is the absence of a framework for funding NGOs to assist in implementation. Another explanation is the government's concerns around controlling delivery. Minimal engagement of NGOs and peer support groups limits the government's ability to achieve its nutrition goals, particularly given human and financial resource constraints described above. Greater broad-based involvement of civil society in delivering nutrition interventions will help increase the coverage of these key interventions, but this must be accompanied by strong oversight and monitoring of NGO activities by government.

3.3.2 STRATEGIC COORDINATION

As discussed previously, national level strategic coordination of nutrition is based on the participation of government departments in a forum led by DAFF. However, South Africa has no higher-level coordination structure above the implementing ministries similar to that seen in other successful countries. However, there is evidence of some coordination occurring at implementation level, through both provincial level initiatives and linkages and referrals at service delivery level.

In KZN, OSS represents a strong and effective coordinating framework at the level of the Premier in which nutrition features prominently. Although coordinating mechanisms exist in the other three provinces, none appear to give nutrition the importance accorded by the KZN model. In fact in EC and FS, respondents voiced their frustration at not having a platform where nutrition related issues and concerns are raised and addressed and where progress towards the INP could be monitored. Linkages in these provinces tend to be more informal and dependent on the efforts of individual health facilities and district managers who refer clients to each other's services. More information on each provinces approach is provided in the summaries of Provincial Case Studies in the boxes on pages 47 to 54.

However, it is worth noting that in the EC, the recently launched the Provincial Integrated Anti-Poverty Strategy (PIAPS)[56] is expected to bring together all provincial departments, and social

partners with the expressed aim of *"…building consensus, solidifying understanding and eliminating duplication around planning, budgeting, implementing, monitoring and reporting.*"

Additional discussion on linkages between government departments during services delivery is presented on page 69 of this report.

Table 9. Extent to which Delivery Mechanisms are used for Nutrition Interventions

	Facility Based Delivery	Community Based Delivery by Government	Peer Support Groups	NGO Community-based Delivery & Support	Commercial / Other	Linkages with DSD Food Access	Linkages with Gardens (DSSD or DAFF)	Linkages with DoH services
HEALTH INTERVENTIONS								
Management of severe malnutrition*	+++							
BANC (Basic ante-natal care) – education and supplements, timing	+++	-		0		0	0	
IMCI (integrated management of childhood illnesses)	+++	0		0				
Management of moderate malnutrition including targeted supplementary feeding*	++	-		-		+	-	
Micronutrient including Vitamin A supplementation*	++	+						
ORS and Zinc*	++	+		0				
Deworming	++	+		0				
Growth monitoring and promotion including the use of MUAC	++	+		-		-	-	
Breastfeeding support*	++	+	+	+		-	-	
Complementary feeding*	+	-	-	-		-	-	
Support for Improved hygiene practice (including in relation to water and sanitation)	+	-	-	-		-	-	
Nutrition education and counseling (part of all of these)	+	-	+	0		-	-	
Food fortification (Vitamin A, Iron and Iodine)*					++			

	Facility Based Delivery	Community Based Delivery by Government	Peer Support Groups	NGO Community-based Delivery & Support	Commercial / Other	Linkages with DSD Food Access	Linkages with Gardens (DSSD or DAFF)	Linkages with DoH services
DSD INTERVENTIONS								
Food access - soup kitchens		++		++			-	+
Food access – food parcels								++
ECD (food in ECD centres)				-	++		+	++
DAFF INTERVENTIONS								
Household food production and preservation (home gardening)		++	-	-	+	-		-
Access to (nutritious) food, food prices zero-VAT-rating					++			
Food security (output 2 of outcome 7)		++	--	-	++	-	+	-

KEY:

0	Not examined but expected
Blank	Not applicable or not expected
+	Minimal or limited delivery
++	Some delivery
+++	Extensive delivery
--	Lack of or insignificant delivery but expected (recommended best practice)

Box 5: KWAZULU-NATAL Case Study

Nutrition Actors in KZN

The **KZN DoH Nutrition Directorate** implements the Integrated Nutrition Programme (INP) in the health sector.

The **KZN DSD Social Welfare Services Programme** provides food access for needy individuals through financial support to ECD centres, food vouchers, food parcels, and soup kitchens.

The **KZN DAEA** implements various Food Security programmes.

Numerous **NGOs** are active in the province including UNICEF, Food Bank, Mothers2Mothers, KwaDindi Agricultural Project, Khet'Impilo, Active Women's Association, FHI360, and until recently, the Academy for Educational Development.

Coordination Arrangements

KZN's anti-poverty programme entitled *Operation Sukuma Sakhe* (OSS), is an inter-departmental coordination mechanism in which the DoH, DSD, DAEA, and other government departments coordinate around anti-poverty measures, including improved food and nutrition which is a central part of OSS. The Premier of KZN champions OSS from a political and administrative perspective, through weekly meetings. The provincial OSS structure is theoretically replicated at district and ward levels, but it is at ward level where OSS "War Rooms" are most effective in coordinating 'case management' of food insecure households

In this evaluation, all provincial respondents and 90% of facility respondents reported that Provincial and Ward OSS task teams are the most effective of forms of intergovernmental coordination in the province.

Leadership and Management arrangements in KwaZulu-Natal

Nutrition "sits" at the highest-level in the province in the premier's office, who adapted former President Thabo Mbeki's "War on Poverty" campaign and launched it as Operation Sukuma Sakhe (OSS) – a KZN Flagship programme, of which Nutrition is a key element.

The overall champion for OSS is the Premier of KwaZulu-Natal. The Premier, MECs, and Heads of Departments have been assigned to each of the 11 districts to champion OSS from a political and administrative perspective[lx]

The Premier's office, through its Deputy Director General, convenes OSS meetings every week. All nutrition/food access/food security programme managers are part of these weekly OSS meetings. OSS activities and coordination at provincial, district, local municipality, and ward levels ensures that nutrition is a priority and it is well represented.

DSD has representation at the OSS through a Senior Manager at Provincial level and Social Work Coordinators at ward levels. DSD has also realigned its interventions to ensure that ECD is a flagship programme that is promoted in OSS meetings. Under the Children Services Directorate of the Social Welfare Programme, a Senior Manager drives the ECD Programme in the province.

The DAEA Food security programme has had limited representation at the OSS in the year of this evaluation.

Resources Available for Nutrition in KZN

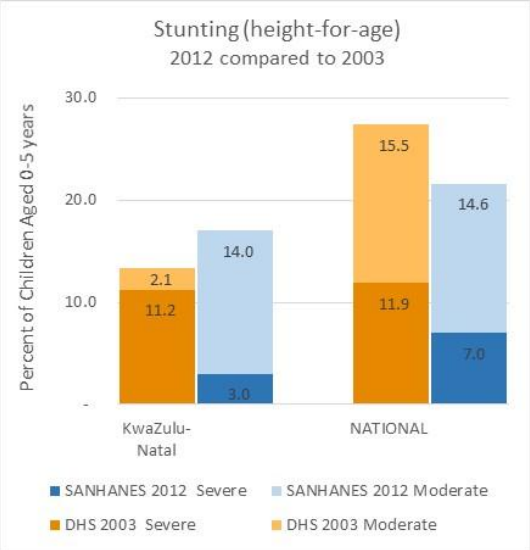
Of all provincial health departments, KZN-DoH has a more balanced budget allocation for nutrition in proportion to the prevalence of child stunting in the province. In addition, KZN has a strong establishment of nutrition posts at management, and facility levels, with relatively low vacancy rates (compared to other provinces). In partnership with UKZN, the department is currently training and deploying nutrition advisors to facilities to address the shortage of staff at that level. KZN also has strong linkages with community care givers (CCGs) to extend nutrition interventions to the community level.

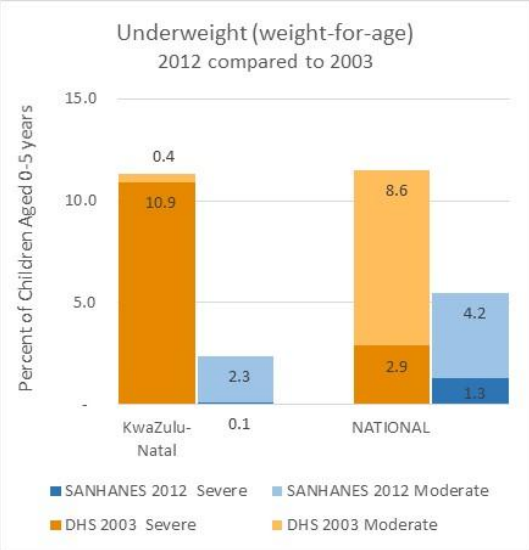
In contrast, DSD lacks permanent staff, with various management positions filled by acting personnel. Likewise, at DAEA, food security positions other than that of senior management, tend to either be part-time or acting positions.

The availability of equipment, drugs, and other supplies was generally high, with some of these being available at 100% of the facilities.

Changes in U5 Nutritional Status in KZN (2003-2012)

KZN has made good progress in reducing severe U5 stunting and underweight since 2003, but stunting has increased overall since 2003. While still lower than the national average, a large proportion of children in KZN are too short (stunted) or too thin (underweight) for their age, and this will have long-term health and cognitive effects into adulthood.





Institutional Capacity for Implementation

DoH and DSD respondents confirmed that there is a clear vision and commitment to implement food and nutrition interventions in their respective departments. In contrast, nearly all DAEA respondents reported a lack of clarity around the DAEA vision for or commitment to food security interventions. Many guiding documents exist to facilitate implementation, except at DAEA where food security officers reported being very unsure of their roles and responsibilities around nutrition in the province.

The nutrition knowledge of KZN nurses is superior to that seen in other provinces (Figure 18 to Figure 20). In nearly every measure nurses provided comprehensive answers to questions around managing mothers with breastfeeding difficulties, growth faltering, and the benefits of micronutrient supplementation. This appears to be related to regular training, as more than 87% of KZN facilities assessed reported that staff received nutrition training in the previous 2 years -- a higher rate than seen in other provinces, except for WC. In contrast, staff at DSD, DAEA and NGOs indicated receiving only limited training on nutrition.

A food security strength in KZN is its vision of “one home one garden”, “one institution garden”, “one community garden”, “one home fruit tree”, and other community agricultural projects (including both gardening and livestock farming). However, implementation of this vision reportedly has been limited to seed distribution with little additional support and even this has been reportedly hampered by stockouts in the supplies of seeds and equipment. Some of the major challenges identified are lack of a clear and stable food security strategy, and high vacancy rates in food security positions.

All departments implementing nutrition have some M&E for monitoring implementation. Indeed KZN DoH has many more nutrition indicators in its plans and reports than seen in other provinces.

Linkages, Referrals and Partnerships

OSS plays a key role in ensuring service linkages, referrals, and partnerships to support the implementation of food and nutrition interventions. The linkages and referrals between DSD and DoH for case management of malnutrition are the most clearly apparent. The participation of agriculture in OSS is less evident at local level. One strength of OSS is the inclusion of NGOs in the committees at district, local municipality, and ward levels. This enhances the partnership between government and NGOs and facilitates the extension of government nutrition services to community level. The partnership between the DoH and UKZN is noteworthy as it illustrates the pivotal role academic institutions can play in the production and development of food and nutrition security personnel.

Box 6: EASTERN CAPE Case Study

Nutrition Actors in EC

The EC sub directorate for Mother, Child and Women's Health (MCWH) in the Department of Health (DoH) ensures the delivery of nutrition interventions in the health sector.

The EC Department of Social Development and Special Programmes (DSD-SP)coordinates various food and nutrition related services to vulnerable families and communities, including food parcels, soup kitchens, vegetable gardens (especially the Orange Flesh Sweet Potato project), and support to ECD centres.

The EC Department of Rural Development and Agrarian Reform (DRDAR) carries out a range of food security interventions.

NGOs include PATH (Program for Appropriate Technology in Health), FHI360, Africare, Treatment Action Campaign, HACCO, and Philani Zuthulele Mentor Mothers who support nutrition in HIV/AIDS and MCWH programmes; and World Vision, Small Projects Foundation, Mzimvubu Nurseries, and Umcunube who support vegetable garden projects. Many NGOs also assist with soup kitchens and food parcel distributions.

Coordination Arrangements

The EC recently launched the Provincial Integrated Anti-Poverty Strategy (PIAPS) to bring together all provincial departments and social partners for a coordinated and integrated response to poverty. Led by DSD-SP, the PIAPS also involves the DoH, DOE, and DRDAR as the primary implementing agents. PIAPS has a Food Security and Nutrition Committee to specifically focus on these issues.

Leadership and Management arrangements in EC

Each of the 3 key government ministries has r its own strategic priorities for addressing food and nutrition in the province.

In the EC -DoH, nutrition is positioned in the INP sub-directorate within the MCWH Directorate. However, a few provincial and district managers felt that the position was too low within the organisational structure of the provincial DoH. At district level, the General Health Programmes Manager coordinates nutrition programmes, and at sub-district level, nutrition structures consist of INP managers, nutritionists, and community liaison officers. Community health workers assist EC-DoH in outreach of services in communities.

In the EC-DSD-SP, food and nutrition is addressed through Programme 2 (Social Welfare) which focuses on short-term relief services to families in distress, soup kitchens for HIV programmes, financial support for ECD centres, and ECD vegetable gardens. The EC-DSD-SP's Programme 3 (Development and Research) encompasses the Sustainable Livelihoods Programme which supports household food production for vulnerable families and communities.

The EC-DRDAR Food Security programme focuses on supporting and empowering emerging farmers to expand their food production to become commercial farmers.

Resources Available for Nutrition in EC

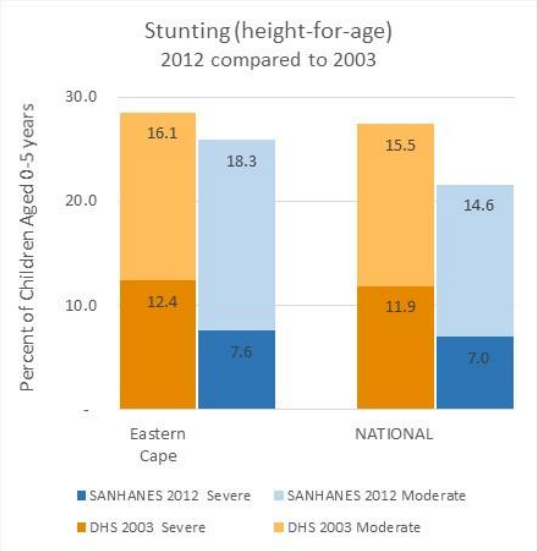
Because each government department has a separate budget for its food and nutrition work in the Province, varying levels of financial commitment can be seen.

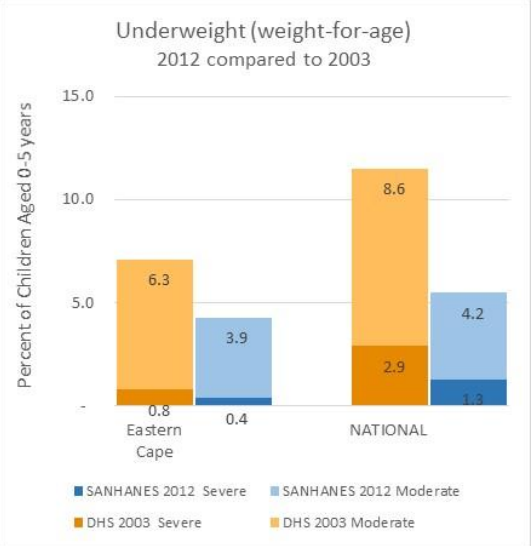
Since 2010/11, the EC-DoH has had a small increase in its nutrition budget, but this is expected to decrease in 2013/14. The Department has a severe shortage of staff at provincial, and sub-district levels where more than 50% of nutrition management posts are vacant. Health facilities also lack dieticians, and 50% of these posts are vacant.

The EC-DSD and EC-DRDAR have a similar situation, where budgets have increased slightly in recent years, but a shortage of human resources limits the ability of the departments to effectively implement their respective food and nutrition programmes.

Changes in U5 Nutritional Status in EC (2003-2012)

Despite some improvements between 2003 and 2012, a large proportion of children in the EC are too short (stunted) or too thin (underweight) for their age, and this will have long-term health and cognitive effects into adulthood.





Institutional Capacity for Implementation

The basic elements for implementation (guidelines, skilled staff, materials, M&E systems) generally exist in the health sector, but are less evident in the social development and agriculture sectors.

Guidelines and standard operating procedures exist for most nutrition interventions in the health sector, except for the interventions focused on behaviour change (e.g. breastfeeding counseling and support, complementary feeding support, hygiene education). In contrast no guidelines were identified for the food access, food security, or household food production interventions. The lack of these inhibits implementation through non-standardised management and delivery with beneficiaries possibly missing out on a comprehensive service.

Targeting of pregnant women and children under 5 is also uneven in the province. While many DoH nutrition interventions are specific to pregnant women and young children, utilisation of these can decline rapidly after the child is older than 6 months. In contrast, no DSD or DRDAR nutrition intervention specifically target pregnant women or children. Rather poverty of food insecurity is the main criteria for enrolment into the food and nutrition programmes.

Nutrition knowledge is very weak across all departments and respondents unanimously recommended in-service nutrition training for all staff delivering and managing nutrition interventions. Even in the health sector, of the 4 provinces assessed EC nurses' had the poorest knowledge around how to manage breastfeeding difficulties, how to counsel mothers of children who aren't growing well, and the benefits of micronutrients.

The M&E system is inadequate to track the delivery and effect of many nutrition interventions, especially for the interventions in the social development and agriculture sectors. More data elements are needed.

Linkages, Referrals and Partnerships

There has been limited strategic coordination between government departments around food and nutrition and findings from the evaluation point to a fragmented approach with each department implementing from its own silo. However, the advent of PAIPS is expected to facilitate stronger coordination and integration between the departments for a more effective approach.

While many NGOs assist in food and nutrition, relationships with government are often weak, and few NGOs/CBOs are sufficiently engaged in extending government services to community level.

Box 7: Free State Case Study

Nutrition Actors in FS

The Department of Health implements interventions to prevent and treat malnutrition in children under five and pregnant women.

The Department of Social Development undertakes food access interventions targeted to food insecure households.

The Department of Agriculture and Rural Development implements Food Security programmes with Rural Development identifying food insecure households through household profiling and Agriculture providing gardening inputs and training to household backyard and community farming or gardening projects.

Both PEPFAR and non-PEPFAR NGOs and CBOs provide nutrition-related support including training, counselling, gardening and food parcels.

Leadership and Management arrangements in FS

The Nutrition and Child Health Programme within the Provincial DoH is a Sub-directorate within the Strategic Health Programmes Directorate. The Programme is managed by a professional nurse, with the support of a Principal Dietician.

The Food and Nutrition Programme within the Department of Social Development is managed under the Community Development Programme at both provincial and district levels. Food security is the main focus of the programme through provision of short term relief services in the form of food parcels. The Department is assisted by the South African Social Security Agency (SASSA) to implement its mandate. SASSA is responsible for the distribution of food parcels and administration of the social security grant. There are currently 1,600 Early Childhood Development Centres (ECDs) registered and subsidised by the Department. The ECD Programme of the Department subsidises the Food Programme within ECD centres with R14.00 per child, 50% of which is meant for food.

DARD's Provincial Director for Farmer Support and Food Security, Manager for Food Security and 4 agricultural extension officers support Food Security programmes at district level. Each district has at least 1 District Food Security Officer to support implementation of food security at district level through extension officers.

Coordination Arrangements

Intergovernmental Coordination mechanisms for food and nutrition at Provincial level are through the Provincial Food Security Task Team Forum which meets quarterly. A similar mechanism exists in some districts. The focus is on Food Security through the Integrated Food Security Strategy led by DARD at the provincial level (DAFF at national) and the National Plan for Early Childhood Development in SA, led by DSD.

The INP is not fully integrated into the above mechanisms thus limiting its effectiveness for addressing nutrition related issues at provincial and district levels.

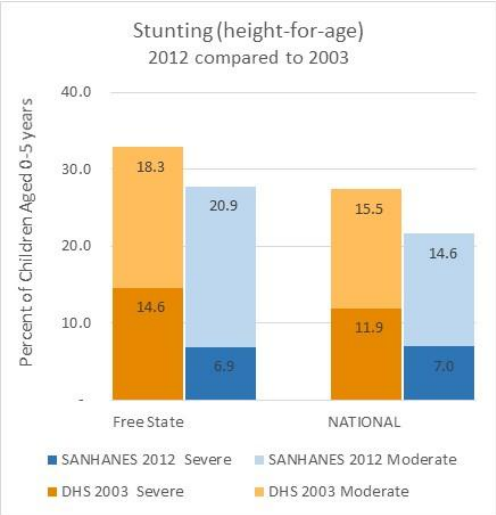
Resources Available for Nutrition in FS

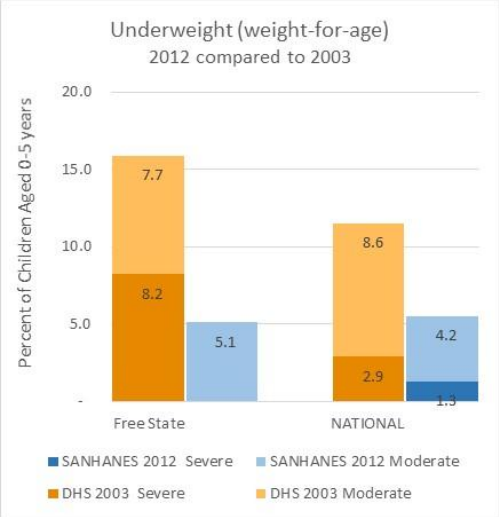
The Nutrition Programme at the Department of Health does not have enough appropriately skilled and qualified professionals in leadership positions. Qualified Nutrition professionals are few and their significance is down played. Provincial DSD does not have adequate numbers of people with skills and expertise in food and nutrition. Staffing levels at DARD are reportedly adequate.

Across the board, the provincial financial situation is dire. This has affected implementation of nutrition interventions at all levels of the health system and restricted the creation and filling of much needed posts in DSD e.g. social workers and ECD positions. This is further reflected in the declining trend of financial allocation from the provincial level to support district level

Changes in U5 Nutritional Status in FS (2003-2012)

Despite some improvements from 2003, a large proportion of children in the FS are too short (stunted) or too thin (underweight) for their age, and this will have long-term health and cognitive effects into adulthood.





Institutional Capacity for Implementation

There is inadequate leadership at Provincial DoH level to effectively inform and support policy implementation at lower levels, but this may in part be due to the fact that nutrition is positioned in a sub-directorate under the Child Health Directorate thus reducing its stature among other health interventions. Respondents believe that the health sector's focus is mainly on other interventions at the expense of the nutrition programme.

At facility level, equipment, supplies, and guidance documents generally tend to be available. However, half of facilities reported stock outs of some nutrition products in the previous 6 months, while only a quarter had adequate nutrition IEC materials in the local language. In addition, poor health workers' knowledge around nutrition interventions leads to erroneous conclusions in services delivery, e.g. the inappropriate substitution of folic acid with vitamin C or calcium when folic acid was out of stock.

Within DSD, there is adequate leadership commitment to address key nutrition and food challenges in the province. There is a directive from provincial leadership at the level of the Premier to promote food gardens, improve household food security and establish ECD centres. There are systems and strategies to implement the policy but implementation is challenged at lower levels. The current complement of 3 social workers is insufficient for ensuring effective implementation of the sustainable livelihoods programme, social relief and the community development clusters.

DARD's leadership and management reportedly lack vision to support the Food Security programme implementation at district level. The emphasis is on numbers of home gardens started, and not the number of sustainable and self-sufficient home and community gardens supported. DARD is adequately staffed at provincial level, but there is reportedly a lack of effective HR at district level. Seeds and equipment to ensure effective implementation of household food gardens are not always available.

Linkages, Referrals and Partnerships

There are no formal interdepartmental referral systems which connect beneficiaries to services provided by other departments. However, there appear to be strong, informal referral networks that are facilitated by dedicated individuals in the various departments.

Food access interventions and household food production interventions have some partnerships with NGOs/CBOs but these are not implemented at scale.

Box 8: Western Cape Case Study

Nutrition Actors in WC

In the WC, the Nutrition sub-directorate within the Directorate of Comprehensive Health Programmes / Division of District Health Services and Programmes ensures the delivery of nutrition interventions in the health sector.

The DSD in the Western Cape implements several targeted feeding initiatives at ECDs; Mass participation, Opportunities and access, Development and Growth (MOD) Centres; and Old Age Service Centres. It currently investigates a work-for food programme where able bodied unemployed persons are offered the opportunity to contribute to their communities in exchange for a stipend and a meal.

The WC Department of Agriculture and Rural Development (DARD) carries out a range of food security interventions.

The City of Cape Town (COCT) implements nutrition interventions and services

NGOs include BADISA, Bossom Buddies, Casidra, CWD, Donald Woods Foundation, Etafeni Day Care Centre Trust, FoodBank SA, George Child and Family Welfare Society, La Leche League, Masiphile food garden project, Mothers2Mothers, Philani Health and Nutrition Project, SASSA which is under the DSD and Stellenbosch University with a food security initiative.

Coordination Arrangements

The Food Security Programme within the DARD drives a provincial Food and Nutrition Workgroup in partnership with DSD, DOE, DoH, and local government of the City of Cape Town. This working group has developed strategic objectives for the Food and Nutrition strategy that has been approved by cabinet. Interventions appear to be specific to the government department implementing them. However, various coordination mechanisms exist which differ according to levels of implementation, whether strategic, administration or service delivery levels.

Leadership and Management arrangements in WC

The Food Security Programme within the DARD drives a provincial Food and Nutrition Workgroup in partnership with DSD, DOE, DoH, and local government of the City of Cape Town. This working group has developed strategic objectives for the Food and Nutrition strategy that has been approved by cabinet. Other than this working group, there doesn't appear to be any other mechanism for broadly coordinating and leading nutrition across different government departments and stakeholders in the province.

Nutrition leadership and management appears to be specific to the government department implementing a specific intervention; many respondents at provincial and district level are satisfied with the level of leadership and management provided by their respective departments. Positive characteristics of nutrition leadership and management commonly mentioned by respondents include: good administrative processes, clear directives from management, good decision making and follow-through, coordinating structures established, and on-going communication. But DSD respondents at district level noted limited human resources as a management challenge for their nutrition related efforts.

The DoH Nutrition Sub-directorate has an APP complete with vision, mission, goals, strategic objectives, performance indicators at output and outcome level with targets, and detailed activity-based budgets. The 2011/12 plan also reflects the involvement of various NPOs at provincial, district, sub-district and municipality levels.

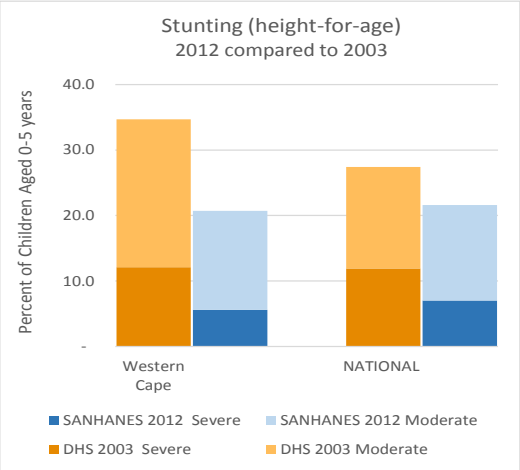
DSD drives the ECD task team and the ECD stakeholder meetings.

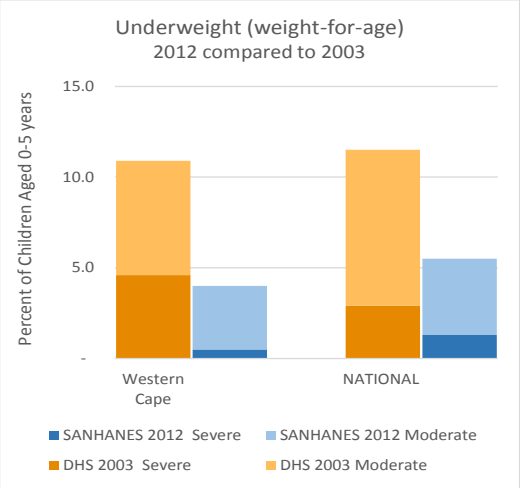
Resources Available for Nutrition in EC

All government departments have allocated human and financial resources to manage their nutrition interventions, as evidenced by their operational plans and APPs which indicate available and allocated human and financial resources as well as required human and financial resources.

Changes in U5 Nutritional Status in WC (2003-2012)

The WC has seen significant improvements between 2003 and 2012 in stunting and underweight of children 0 – 5 years. The prevalence of stunting amongst children in WC is now lower than the national average while underweight prevalence have been more than halved in the period 2003 - 2012.





Institutional Capacity for Implementation

Nutrition interventions in the WC province are implemented through government departments - provincial Department of Health (DoH), Social Development (DSD), Agriculture and Rural Development (DARD), and the City of Cape Town each play major roles in the implementing the INP.

Within the DoH, District Nutrition Coordinators and dieticians/nurses/community-based workers are the main programme implementers. Whereas there are appropriate staff at provincial and district levels, there are challenges with recruitment and retention of skilled medical and nursing staff at facility levels. Guidelines and standard operating procedures exist for nutrition interventions in the health sector. Annual DoH APPs are used to convey new initiatives and important implementation/performance plans. The DoH uses circulars to communicate important programme changes and to guide implementation. The other departments as well as the city of Cape Town (COCT) Public Health reportedly also have documentation describing and guiding their programme implementation. The DoH has also developed and roll-out tools like the Road to Health booklet, community level IEC materials like a Pocket for the Road to Health card as they work towards enhancing child nutrition in the province.

The DSD has two directorates that are involved in the implementation of nutrition programmes: (i) the Community Development Directorate which funds community-based NPOs to provide food to the vulnerable and needy and (ii) the ECD Directorate which supports and provides grants (R15 per child per day) to registered ECD Centres. DARD is responsible for food security programmes. WC also benefits from nutrition services and programmes implemented by numerous NGOs in the province.

Programme staff at provincial and district levels reported being satisfied with the level of leadership and management provided by their respective departments.

M&E in all departments is reportedly adequate to track the delivery of nutrition interventions; however, limited data is available to show how these interventions and services are used and what immediate effects they have on children's nutritional status.

Linkages, Referrals and Partnerships

There is limited strategic coordination between the government departments around food and nutrition and findings from the evaluation point to a fragmented approach with each department silo'd in its implementation efforts. There is engagement of NGOs but not at scale. One innovative partnership is seen between DSD and the University of the Western Cape. Students/interns visit ECD sites once per quarter to give talks on healthy living and nutrition and support the DSD's ECD.

3.4 Organisational Context and Culture

3.4.1 SUFFICIENCY OF LEADERSHIP ARRANGEMENTS

The three key government departments implementing nutrition interventions across the four provinces are the Departments of Health, Social Development (and its agency the South African Social Security Agency (SASSA)) and Agriculture. The respective roles of these departments are meant to complement each other with the DoH focusing its efforts on nutrition, health and food safety interventions, while DAFF focuses on food production and trading and DSD on food access interventions. To varying degrees, these departments work with each other and/or with community-based not-for-profit organisations as a way of extending their reach.

DEPARTMENT OF HEALTH:

Most of the nutrition interventions delivered by the DoH are delivered through health facilities and, to a limited extent, through community-based channels. The leadership and management structure for nutrition within the Department of Health tends to be more distinct and separate at higher levels of government and gets blurred at the lower levels. At the national level, there is a separate directorate for nutrition, a structure that is not commonly replicated at the provincial and district levels. Across the four provinces there is no uniformity in where nutrition is placed. Only KZN had a nutrition directorate while the other three (3) provinces had nutrition located at the sub-directorate level under different directorates:

- EC - under the Mother, Child and Women Health (MCWH) and INP Directorate.
- FS - under the Strategic Health Programmes Directorate.
- WC - under the Directorate of Comprehensive Health Programmes / Division of District Health Services and Programmes.

At district level, district nutrition managers are responsible for ensuring the implementation of nutrition interventions and providing oversight and support at hospitals and health facilities and are supported by other nutrition personnel at the sub-district level. However, not all districts have district nutrition managers due to the shortage of dieticians and other nutrition-trained personnel and/or budgetary constraints leaving a gap in the provision of much needed oversight and support at the implementation level.

In KZN, nutrition “sits” at the highest-level in the Premier’s office and is a directorate in the KZN Department of Health. This raises the profile of nutrition in the Province and facilitates implementation of the various interventions. In contrast, in the other 3 provinces, there is a lack of strong nutrition leadership at the provincial and district levels. This has resulted in nutrition not being considered as important as other health programmes by DoH leadership at all levels (particularly in EC and FS) and has led to nutrition interventions getting lost or watered down and constantly competing with clinical interventions for scarce resources.

There are no separate champions at facility level for nutrition interventions as these are integrated into the regular services delivered.

DEPARTMENT OF SOCIAL DEVELOPMENT:

Nutrition interventions within the Department of Social Development mainly address food access and are delivered through different directorates as well as through the SASSA. There appears to be strong support for ensuring access to food by the neediest members of society, as evidenced by the DSD’s launch of the ‘Food for All’ campaign. Food access interventions enjoy the support of the highest level of provincial leadership (FS, KZN). However, there was no evidence to suggest that there is as strong a commitment to addressing the quality (nutritious value) of the food provided as there is with the quantity. DSD’s main channel for reaching children under 5 years of age is through its support of ECD Centres.

DEPARTMENT OF AGRICULTURE:

DAFF's integrated food security strategy (IFSS) of 2002 guides and informs Food Security interventions. The vision of IFSS is to attain universal physical, social and economic access to sufficient, safe and nutritious food by all South Africans at all times. The goal of the DAFF's Food Security Programme is to transform food-insecure households and communities into food secure households and communities with a continuous food supply. However, the focus within the leadership and management has recently shifted from production for consumption to production for market.

Inter-department coordination between the food security programme and other departments is weak at national, provincial, and district levels.

Despite a clearly stated and cabinet-approved strategic objective, Output 2 of Outcome 7 and with a children-specific target for 2014[57] - "The rate of under-nutrition of children falls from 9.3% to 5%" - there is no integration or mainstreaming of Food Security into other child-focused services.

There is a concern among agriculture respondents in some provinces (EC, FS, and KZN) that the frequent changes in political leadership have led to abrupt changes in strategies and negatively affected the implementation of Food Security programmes. There is also a frustration among the district level agriculture departments that there is a lack of understanding at management levels about the nature of Food Security, because the main activity which tends to be implemented appears to be the distribution of seeds and gardening tools for home gardens (FS, KZN).

3.4.2 MONITORING AND EVALUATION

M&E systems are the hallmark of good programme management, as strong monitoring systems support credible programme evaluation and that both provide feedback for improvements in productivity, effectiveness and impact.

Monitoring and evaluation of the 18 nutrition interventions addressed in this evaluation are department-specific as will be discussed below. There is no integrated INP M&E system in which all data related to food and nutrition security is captured. Neither do the various M&E systems employed by the different departments "speak" to each other. The table below shows the 18 nutrition interventions and the presence of a routinely collected direct or indirect indicator, whether targets are set for the intervention in national and provincial APPs and whether the indicator is nutrition sensitive.

Table 10. Presence of Indicators, Targets and Nutrition Sensitivity

	Nutrition Intervention	Direct Indicator for Nutrition component	Indirect Indicator for nutrition component	Description of Indirect Indicator	Source	Targets Specified in APPs
1	Access to (nutritious) food, food prices zero-VAT rating	No	No			
2	BANC (Basic ante-natal care) – education and supplements, timing	No	Antenatal visits before 20 weeks rate		KZN DoH APP 2013/4-2015/6	Yes, KZN DoH
3	Breastfeeding Promotion TBC	No	Infant exclusively breastfed at HepB 3rd dose rate	Proportion infants reported exclusively breastfed at 14 weeks Hepatitis B 3rd dose vaccination	DHIS	Yes, DoH APP, FS Yes DoH APP, KZN
4	Complementary feeding	No	No			
5	Deworming	Deworming dose 12-59 months coverage (annualised)	Vitamin A supplementation 12-59 month coverage (annualised)	Deworming medication must be given together with the Vitamin A. Routine Vitamin A supplementation consisting of a single dose every 6 months until 59 months (4 year 11 months)	DHIS NIDS 2013	
6	ECD (food in ECD centres) (DSD)	No	Percentage increase in the number of children accessing ECD programmes		DSD APP 2012/2013	Yes, DSD APP National Yes, EC DSD
7	Food access (e.g. food parcels, soup kitchens)	Partial	Unknown			Yes, DSD APP National Yes, EC DSD
8	Food Fortification	No	No			
9	Food security (output 2 of outcome 7)	No	No			Yes, DOA EC Yes, DOA APP KZN

	Nutrition Intervention	Direct Indicator for Nutrition component	Indirect Indicator for nutrition component	Description of Indirect Indicator	Source	Targets Specified in APPs
10	Growth Monitoring and Promotion	• Not gaining weight rate under 5 years • Underweight for age under 5 years incidence (annualised) • Child under 2 years underweight for age incidence (annualised)	Child under 5 years severe acute malnutrition incidence	Child under 5 years with growth chart weight-for-height below -3SD Extended definition A child under 5 years is classified to be severely malnourished if the child has a weight for height/length (WHL) below -3 Standard Deviation scores (<-3SD) and/or presence of bilateral pitting oedema and/or child (6-59 months) has a mid-upper arm circumference (MUAC) of less than 115mm	NIDS 2013 KZN DoH APP 2013/4-2015/6 DHIS	Yes, EC APP
11	Household Food Production / Food Preservation (home gardens) TBC	No	• Number of verified food insecure households supported. • Number of food security status reports compiled and submitted • Number of hectares planted to field crops towards the attainment of 300,000 ha established to produce food in order to support poor house-holds & smallholder farmers		EC DRDAR APP 2013/14	Yes, DOA APP,EC
12	Improving Hygiene Practice (including in relation to water and sanitation)	No	No			

	Nutrition Intervention	Direct Indicator for Nutrition component	Indirect Indicator for nutrition component	Description of Indirect Indicator	Source	Targets Specified in APPs
13	Integrated Management of Childhood Illnesses (IMCI)	Yes	• Children under 5 years newly diagnosed with severe acute malnutrition per 1,000 children under 5 years in the population • Child under 5 years diarrhoea with dehydration incidence (annualised) • Child under 5 years pneumonia incidence (annualised) • Child under 5 years diarrhoea case fatality rate • Child under 5 years pneumonia case fatality rate • Deworming dose 12-59 months coverage (annualised)	A child under 5 years of age who was admitted for severe acute malnutrition (IMCI criteria) and died as a result of severe acute malnutrition. [ICD 10 codes E40, E41, E42, and E43.] A child under 5 years is classified to be severely malnourished if the child has a weight for height/length (WHL) below -3 Standard Deviation scores (<-3SD) and/or presence of bilateral pitting oedema and/or child (6-59 months) has a mid-upper arm circumference (MUAC) of less than 115mm. The weight-for-age chart in the Road-to-Health Booklet shows body- weight relative to age in comparison to the median (0-line)	DHIS NIDS 2013 KZN DoH APP 2013/4-2015/6	
14	Management of Severe Malnutrition	• Child under 5 years severe acute malnutrition incidence • Child under 5 years severe acute malnutrition case fatality rate	• Proportion of hospitals with paediatric wards in NHI pilot districts implementing management of severe acute malnutrition protocol • Proportion of District Health Specialist Teams trained on management of severe acute malnutrition.	Hospitals with paediatric wards in the NHI pilot districts monitored using the tool and found implementing management of severe acute malnutrition protocol Extended Definition This assesses the capacity of the facility to implement (Resources and supplies availability) as well as any implementation of the WHO ten steps. NOTE: The quality on how this is implemented is done using the auditing tool	DHIS NIDS 2013 KZN DoH APP 2013/4-2015/6	Yes, DoH KZN

	Nutrition Intervention	Direct Indicator for Nutrition component	Indirect Indicator for nutrition component	Description of Indirect Indicator	Source	Targets Specified in APPs
15	Micronutrient including Vitamin A supplementation*	Vitamin A supplementation 12-59 month coverage (annualised)			DHIS NIDS 2013 KZN DoH APP 2013/4-2015/6	Yes, DoH APP National Yes, DoH KZN
16	Nutrition Education and Counseling TBC	No	No			
17	ORS and Zinc		Child under 5 years diarrhoea with dehydration incidence (annualised)		KZN DoH APP 2013/4-2015/6	
18	Targeted Supplementary Feeding	• Child under 5 years on food supplementation coverage • Child under 5 years food supplementation coverage (annualised)	No		NIDS 2013 DHIS	

HEALTH AND HEALTH ACCESS INTERVENTIONS

All four provinces have M&E systems to track the implementation of most facility-based interventions. However, the quality and comprehensiveness of this data is not consistent across the provinces. At the facility level, data on nutrition interventions with indicators in the District Health Information System (DHIS are routinely collected. However, many respondents acknowledged that there are issues with timeliness and completeness. Both these issues were mainly attributed to shortage of staff although other logistical and technological reasons were also mentioned.

Programmatic reviews in all four provinces are said to occur through district supervisory visits, and through management reviews at different levels (including sub-district level in the EC). However, shortage of staff and transport issues limit the frequency of these visits. In addition, provincial quarterly review meetings also serve as a way to review implementation.

FOOD ACCESS – ACCESS TO NUTRITIOUS FOOD

In terms of programme review processes, DSD does not appear to have a formal review process that focuses on nutrition issues or outcomes for its Food Access interventions. Although 75% of DSD respondents reported that there was an efficient management process for measuring the effectiveness of the delivery of Food Access interventions at service delivery point, we were unable to identify any standard indicators or data collections methods. All the M&E information we received suggested that each province tracks Food Access in its own unique way.

In KZN, M&E systems reportedly function well with clear intervention-specific indicators, and few data quality issues. KZN-DSD tracks the implementation of the Food Access interventions from data collected solely within the District Information system (DIS).

In the EC, Home-Based Care Workers and Social Workers collect various data on DSD services, but little data is reported to provincial or national level on the reach or nutritional effects of the food parcels, soup kitchens, or ECD interventions.

No information on the data elements being tracked for Food Access were obtained for WC or FS.

No M&E data appears to be disaggregated to better track the number of children under 5, and pregnant or lactating mothers who have been reached with Food Access interventions. Moreover, the quality of existing data is uncertain; for example, there are lists of people who visit Soup Kitchens, but respondents reported that many more people visit these kitchens than are on the list.

There is also no evidence that there is a consistently employed M&E system which monitors the quality (nutrition) aspect of the foods provided through these interventions.

FOOD PRODUCTION AND AVAILABILITY

There is an absence of standardised measures of food security in South Africa, and regularised ways of collecting and reporting them at provincial, district, and local levels[lviii]. These gaps restrict the ability of policy makers to address food insecurity. Policy makers are therefore constrained in their ability to identify interventions appropriate to different situations and needs.

At national level, data on individual or household dietary diversity comes mainly from income and expenditure surveys, but there are issues with the accuracy and reliability of these data over time, and the data is not sufficient for DAFF to track what households produce and what they consume vs. sell.

At provincial level, there are various M&E approaches carried out for the establishment of household gardens, but there appears to be no tracking of any food preservation activities, and

there is no tracking of the intervention's effects in terms of food consumption or nutritional status.

Across the four provinces and at national level, there is an absence of indicators disaggregated by the key demographic target group – i.e. pregnant women and children under 5.

3.4.3 AVAILABILITY AND ADEQUACY OF INFRASTRUCTURE, MATERIALS, SUPPLIES IN HEALTH FACILITIES

The availability and adequacy of infrastructure, materials and supplies at the health facility level was established using a Rapid Assessment Tool. The results are summarised in Table 11 below.

Table 11. Availability of Infrastructure, Materials, and Supplies at Health Facilities

Element	% of all health Facilities with availability
Infrastructure	
Sufficient number of consultation rooms	72%
Sufficient space for counseling with auditory and visual privacy	69%
Sufficient number of counseling rooms	56%
IEC Materials (Posters or Pamphlets available in the health facility)	
Promotion of EBF	78%
Hand washing posters at basins	67%
Vitamin A	64%
Healthy Eating/Dietary Guidelines	64%
Complementary Feeding	53%
Hand washing posters at toilets	47%
Breastfeeding in the context of HIV	44%
Management of Severe Malnutrition	42%
Nutrition During Pregnancy	39%
Feeding of the Sick Child	25%
Policies, Protocols, Guidelines (available in the health facility)	
Malnutrition Supplementation Register	92%
Nutrition Supplementation Guidelines	89%
Vitamin A Supplementation	86%
HIV and Infant Feeding	81%
PHC Tick Register	81%
Management of Severe Malnutrition	75%
IYCF Policy	67%
Equipment, Drugs, Supplies (available in the health facility)	
functioning baby weighing scale	97%
functioning adult weighing scale	92%
Vitamin A Capsules 200,000	92%
Nutritional Therapeutic Programme /TMS Porridge	92%
Iron	89%
Vitamin A Capsules 100,000	86%
Folic Acid	86%
MUAC Tape	83%
Length measuring boards	72%
Road to Health Cards - Boys	72%

Element	% of all health Facilities with availability
Road to Health Cards – Girls	72%
Oral Rehydration Salts	72%
Zinc	61%
Vitamin A Capsules 50,000	44%

Most facilities appear to have the materials and supplies required to deliver facility-based nutrition interventions. Over 80% of facilities visited had key supplements, medicines and supplies required with a few notable exceptions. About a quarter of facilities visited did not have ORS available and close to 40% of facilities had no Zinc tablets on hand. This was disturbing as both of these are critical for the management of diarrhoea – a common problem with children under 5.

Also noteworthy is the very low numbers of facilities which had stock of 50,000 IU Vitamin A Capsules, which is commonly given to patients with severe malnutrition. The low percentage of facilities who had the combined Iron-Folic Acid is probably explained by the large numbers of facilities that have the single versions of Iron (91%) and Folic Acid (88%). Food parcels are rarely distributed via health facilities thus explaining the very low numbers of facilities who had them in stock. There are insufficient supplies to help mothers with breastfeeding difficulties, such as nipple or breast shields, breast pumps for expressing milk, and feeding cups.

Over a quarter of facilities visited did not have consultation rooms and roughly half did not have separate counseling rooms. It is encouraging, however, that over 70% of the facilities had space with visual and auditory privacy to provide counseling. Nevertheless, given the importance of nutrition counseling as an integral part of delivering nutrition interventions, it is disturbing that almost 30% of facilities have no appropriate space for counseling.

Guidelines and protocols for most of the nutrition interventions were available at over 80% of the facilities visited. The exceptions were the guidelines for the Management of Severe Malnutrition (74% of facilities had this) and Infant and Young Child Feeding (only 68% of facilities had this).

IEC materials on key nutritional messages were generally not available at the facility level. Considering that mothers tend to visit facilities only when children are sick, it is noted with concern that the least-available IEC material at the facility level was the “Feeding the Sick Child” poster/pamphlet which was available at only 26% of the facilities. Not having IEC materials easily available at the facility level is a missed opportunity to communicate important nutrition messages to pregnant women and mothers /care-givers of children under 5. This is consistent with our determination that nutrition counseling, support and education is not mainstreamed or prioritised in health facilities (Table 11 above).

It is encouraging to note, however, that Promoting Exclusive Breast Feeding was available at 79% of the facilities.

3.5 Institutional Capacity for Implementation

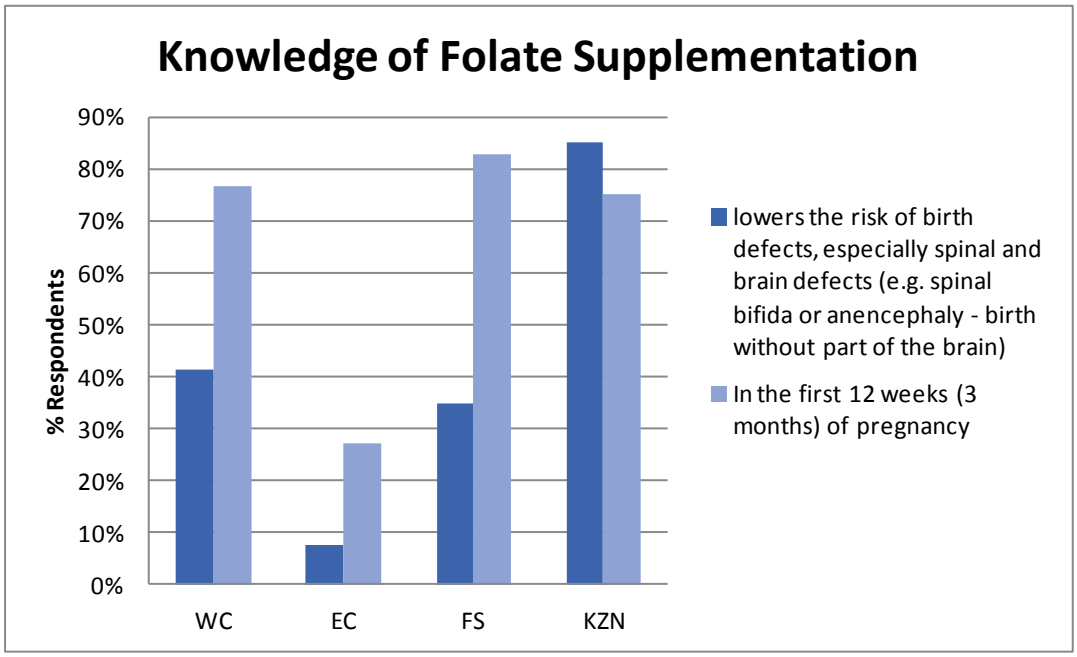
3.5.1 SUFFICIENCY OF SKILLS, TRAINING

In addition to shortage of staff, there is evidence of a lack of skills and knowledge among existing staff at the service delivery level around key nutrition interventions. A Health Workers Knowledge Tool was administered to nurses at all health facilities visited and their knowledge of

nutrition interventions assessed. The results varied widely across provinces with nurses in KZN demonstrating the most knowledge and EC nurses the least.

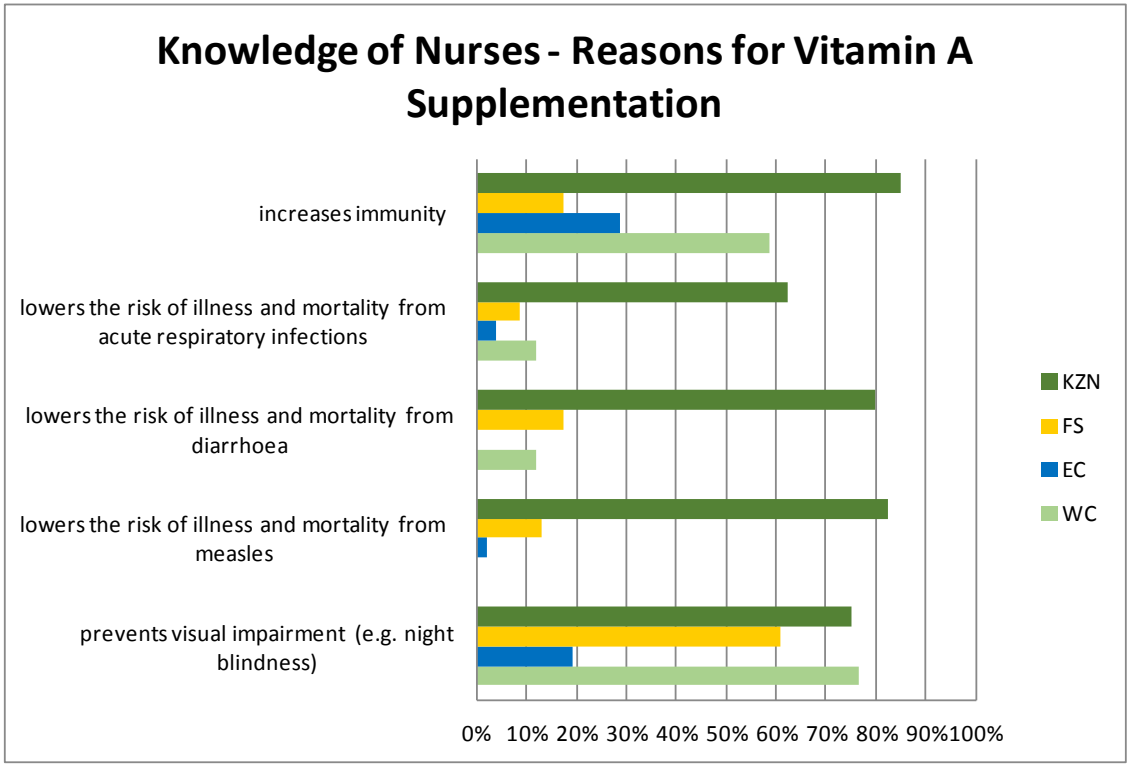
According to the results, nurses at the facilities visited appeared to have only a superficial understanding of the nutrition interventions as they often knew when to give an intervention but not always why. As illustrated in Figure 18, over two-thirds of nurses in FS, KZN and WC knew when to give folic acid to pregnant women but, except for respondents in KZN, fewer than 40% knew why. EC respondents demonstrated the least knowledge for both questions.

Figure 18. Nurses Knowledge of Folic Acid Supplementation



Another example of nurses' poor knowledge levels regarding the nutrition interventions they implement is illustrated in Figure 19 below. While most nurses could associate Vitamin A Supplementation with prevention of blindness, few knew its link to increased immunity, and even fewer could identify the specific diseases it has an effect on. The exception again were the nurses in KZN who had a high level of knowledge about nutrition.

Figure 19. Nurses knowledge of Vitamin A Supplementation



Nurses' knowledge related to counseling and nutrition education was very weak in all provinces except in KZN. Only 50% of nurses in the 3 other provinces could recall the main counseling messages to be given around nutrition for different scenarios, in comparison to over 80% of nurses in KZN. Interestingly, counseling around IYCF, breastfeeding until 6 months of age, and growth monitoring were the messages most commonly recalled by all nurses. In contrast, few could recall the importance of continued breastfeeding until 12 months and during illness.

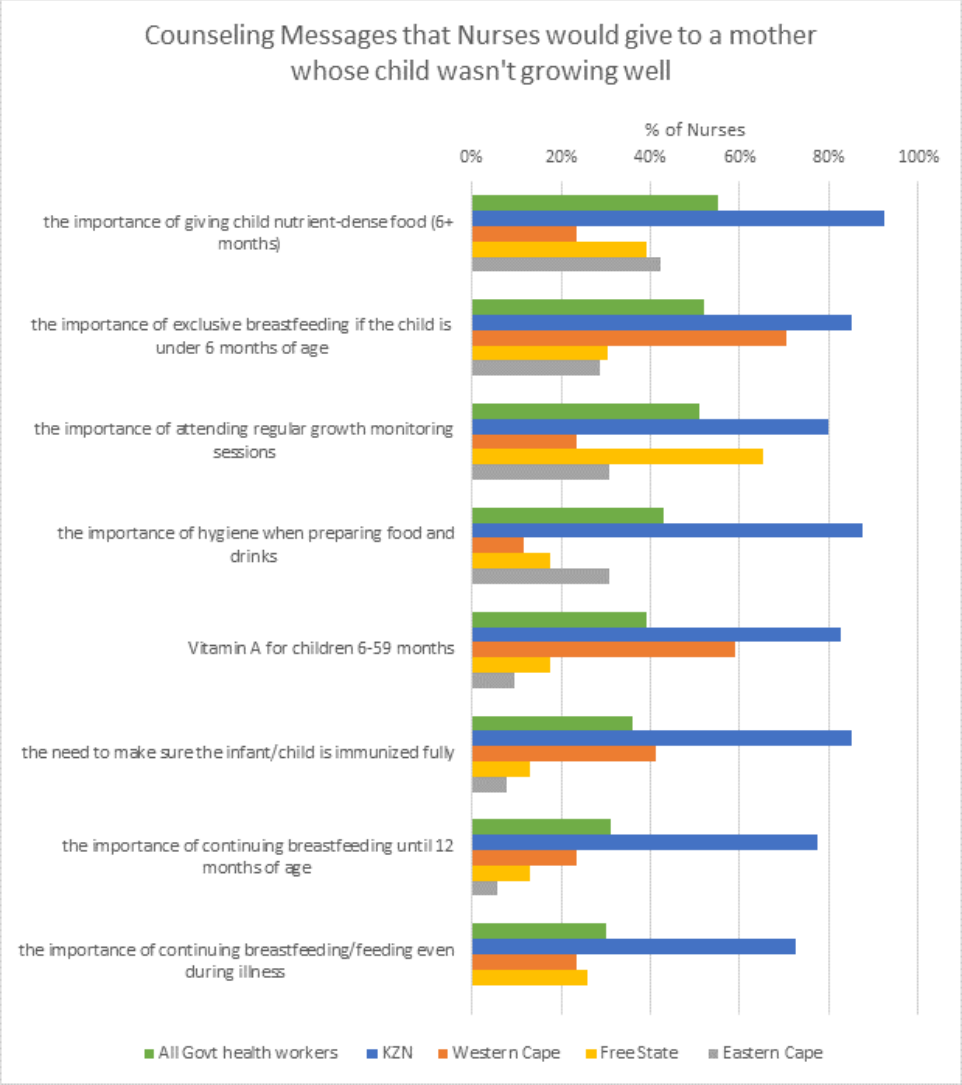
The poor knowledge of nurses around nutrition interventions highlighted in Figure 18 to Figure 20 above appears to reflect the level of nutrition training reportedly received by respondents at the facilities visited. Many of the health facilities visited in the WC and KZN (over 87%) reported that clinic staff had received nutrition training while in FS, a slightly lower number of clinics (85%) said that only some of their staff had received nutrition training in the last 2 years. In sharp contrast, only 25% of health facilities in EC reported receiving nutrition training in the last 2 years and, disturbingly, 62% reported having received no nutrition training at all for their staff.

KZN's consistently better nutrition-related knowledge may be due to better or more intensive and targeted nutrition training stemming from the importance the province places on nutrition, but this could not be verified during the evaluation.

In facilities where training has been received, respondents repeatedly cited a variety of barriers to delivering nutrition interventions – namely, health workers' weak skills, lack of time, staff shortages, and/or frequent staff changes of trained staff due to attrition or rotation (particularly in the EC).

Time and staffing constraints limit nurses' ability to (i) fully digest and understand the guidelines, (ii) attend relevant nutrition training when these are offered, and (iii) give adequate time to patients and provide the necessary nutrition counseling.

Figure 20. Nurses' Knowledge of Counseling Messages to be given



In an attempt to address this skill and personnel gap at facility level, KZN DoH Provincial Nutrition Directorate has recently initiated a programme of placing Nutrition Advisors at facilities. Nutrition Advisors are Community Care Givers trained in nutrition and with the ability to provide much needed nutrition support and non-clinical interventions at clinic level. Training of nutrition advisors by the University of KwaZulu-Natal is currently underway and will continue until the target of 655 Nutrition Advisors has been met.

With regards to food access interventions, respondents broadly cited human resources constraints as limiting implementation, particularly vacant positions and inadequate training of those currently delivering and monitoring Food Access interventions and ECD support. In FS, the staff charged with managing the key food access interventions reported only receiving informal in-service training on food and nutrition. KZN respondents from DSD well as NGOs, noted limited training on food and nutrition and a lack of refresher trainings as limiting implementation.

In the area of food production, respondents from the WC DOA, generally reported having an adequate skill level for implementing relevant nutrition interventions noting that the training to become an agriculturalist included a nutrition component. EC and KZN respondents, on the other hand, noted a shortage of skills amongst staff in implementing food security interventions. District and local DOA agriculture officers in KZN, who are mainly farmers, indicated that they

do not understand their "role in food security", highlighting a need for effective communication and capacity building around the departments' Food Security strategies and plans.

3.5.2 SUFFICIENCY OF SERVICE STANDARDS AND NORMS

All of the 18 key nutrition interventions covered in this evaluation have national and/or provincial standards and norms governing their implementation. Provincial adaptation of national guidelines and/or protocols varies by province with KZN and WC observed as adapting guidelines more than EC and FS. However, the degree of adaptation is generally not significant, with the key elements retained.

The common guidelines and protocols governing the implementation of the various nutrition interventions are shown in the Table 3 on page 15 of this report.

The availability of these guidelines and protocols does not necessarily mean that implementers actively engage with them. For example, several respondents noted that nurses do not read policy guidelines due to high workloads and time constraints related to staff shortages. It was therefore noted that it would be more productive to have key policies, strategies and nutrition guidelines operationalised in the form of Standard Operating Procedures (SOPs) and wall-chart protocols to ensure full understanding and compliance. In addition, further re-orienting these SOPs and protocols along a life cycle continuum (as discussed in Section 3.1), and training health care workers to view them as such, could possibly lead to better incorporation of nutrition into the regular services at facility level.

3.5.3 SUFFICIENCY OF PLANNING AND MANAGEMENT FOR IMPLEMENTATION

Planning for nutrition is inconsistent across departments and the four provinces. Planning for nutrition is part and parcel of each department's Annual Performance Plan (APP), although the specific targets and budgets for nutrition are not always evident, and the extent to which nutrition is considered in the plan and budget varies.

APPs for national and provincial Health all contain separate budget line items for nutrition, and we were able to determine that separate APPs had also been developed for the nutrition sub-programme in in KZN and WC. Few of these APPs contain programmatic targets for nutrition services delivery, except for KZN where the performance plan lists clear nutrition-specific targets.

APPs for national and provincial Agriculture have separate budget line items for Food security, but APPs contain little to no explanation as to how these budgets will be expended for food security. Moreover, there is no consistency as to what targets are formulated for Food Security. National DAFF does have Food Security indicators around increasing "profitable food production" among subsistence and smallholders, while the APP for EC-DOA has targets for food security support to "verified food insecure households".

DSD APPs at provincial and national level contains little to no information about budgets for Food Access interventions, although there are targets for Food Access interventions in the national and EC Provincial APPs.

Management of nutrition interventions in KZN is reportedly strong for both DoH and DSD; respondents in these sectors confirmed the existence of a clear vision and commitment to implement nutrition/food access interventions in their respective sectors – reflecting most likely the province's strong leadership around nutrition as in integral part of its war on poverty efforts.

However, KZN DAEA respondents (aside from a provincial manager) were not positive about DAEA vision or commitment of Senior Management to food security interventions. Unfortunately, this perspective is not unique to KZN – in 3 of the 4 provinces where fieldwork occurred for this evaluation, Agriculture respondents strongly articulated the need for (i) better

and appropriately skilled management for better administration of the food security programme and utilisation of resources, as well as (ii) better strategic planning that considers long-term versus short-term approaches to food security. *"We don't do things as well as we should"* said one respondent from the EC.

Management of nutrition interventions in the health sector varies across provinces. In WC the researcher observed that DoH has both the political will and vision to implement nutrition, and as a result resources are generally available to match the needs identified. Indeed, WC is the only province that has successfully protected its DoH nutrition budget over the last 4 years – in other provinces, there has been a downward trend for DoH nutrition budgets, even if provincial budgets have increased. The KZN DoH Nutrition Directorate has strong business planning processes where districts use the provincial business plan to devise their own district-specific business plans for implementing nutrition at district level. There is no evidence that other provinces have similar decentralised approaches to health planning.

In both EC and FS, there is a strong sentiment that DoH management do not consider nutrition as important as other health programmes (e.g. HIV, TB, and maternal health), and as a result, nutrition is forced to compete with other programmes for human and financial resources.

DSD respondents were generally satisfied with the quality of management at provincial and district levels, despite an overall shortage of social workers and heavy workloads.

Internal reviews of the performance of nutrition interventions were not consistently carried out by any provinces or district in any department.

3.5.4 SUFFICIENCY OF LINKAGES, REFERRALS, AND PARTNERSHIPS

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

- strong integration of services within departments,
- strong linkages and referrals between government departments, and
- strong partnerships with community-based organisations or other institutions to extend the reach directly to households.

Each of these are further explored below.

INTEGRATION OF SERVICES WITHIN DEPARTMENTS

Integration is a strong principle for health services delivery in South Africa, and the DoH has been successful in facilitating integration at facility level, particularly for integrating HIV into PHC services.

While many nutrition interventions and nutrition components of interventions are fairly well integrated into existing clinical services (i.e. nutrition is a component of BANC, maternity, well-baby services), the integration of nutrition-related counseling, education, and support services is lacking. This is partially attributed to the high workloads of health care workers, but is also to health care workers lack of understanding of the importance of nutrition counseling and education in increasing the uptake of other nutrition-related health services (growth monitoring, vitamin A supplementation, de-worming, etc.).

Integration of health services also involves outreach to communities by government CHWs or CCGs in order for identifying and following up cases, intending the reach of services, and reinforcing messages. For nutrition, little outreach is taking place except in KZN which has a strong community-based service delivery model for nutrition interventions.

In some provinces, the health sector provides key nutrition-related supplies to private health institutions to extend the reach of nutrition. For example, EC-DoH and KZN DoH both give

Road to Health booklets to private hospitals and private doctors, although KZN requires payments for these. EC DoH is introducing the MBFI to private hospitals. It used to provide vitamin A to private hospitals but this stopped in 2012. Chris Hani district in the EC also collaborates with private doctors on immunisation. In uMgungundlovu District in KZN, the DoH involves private health facilities in vitamin A campaigns

Within the DSD, integration of nutrition interventions was less evident. Its sustainable livelihoods interventions, food access interventions (parcels and soup kitchens), and support to ECD centres appear to be implemented separately with little to no effort to provide complementary services to the most vulnerable families. In addition, there is no integration of nutrition education into any food access services, nor are there any nutrition guidelines around food access interventions (with the exception of ECD). However, DSD appears to work closely with SASSA in carrying out Food Access interventions as part of the Social Relief of Distress.

Within agriculture, there is no integration of nutrition activities (such as nutrition education or growth monitoring) in food security services, nor are there any nutrition guidelines governing food security interventions.

Likewise, municipalities do not integrate hygiene education into their toilet construction activities.

LINKAGES AND REFERRALS BETWEEN GOVERNMENT DEPARTMENTS

Ideally, when cases of malnutrition and food insecurity are identified, DoH, DSD, and DOA should work together to provide a comprehensive package of services to the vulnerable families and communities. Referrals and linkages between the different departments' services depend on close communication and integrated information systems to track the delivery of services as well as progress in remediating the nutrition problem.

Unfortunately, referrals and linkages at local level are ad hoc or weak, with the exception of KZN, where the OSS mechanism enables an integrated approach to case management across departments at local level through regular communication and shared information. Without an established structure like OSS, social workers, health workers, and food security personnel do not effectively work together to resolve specific cases.

Severe malnutrition cases treated by DoH are not consistently enrolled in the DSD / SASSA Social Relief of Distress programme and given food parcels. As one DoH respondent lamented, "*Severely malnourished children are discharged from hospitals without food support, and then they end up being re-admitted*". Likewise, vulnerable households identified by DSD and agriculture are not consistently linked to relevant nutrition services delivered by the health sector (e.g. growth monitoring, micronutrient supplementation, treatment of diarrhoea and respiratory illnesses, etc.). Constraints to more robust linkages between each department were cited as shortage of personnel and lack of transport for following-up on identified cases.

Duplication of household profiling efforts are also evident between DSD and agriculture, who both provide food security support. There was also mention of duplication of efforts between agriculture's food security support and the support provided by some municipalities who co-finance irrigation schemes and buy tractors for communities.

Another example of poor linkages mentioned by one respondent is the disconnect between DSD's and DoH's nutrition messages that exclude reference to indigenous foods like goat meat, goat milk or goats cheese, and DAFF's emphasis on promoting production of indigenous foods.

However, there are examples of linkages with institutions. In some provinces, DOA supplies seeds to clinics and ECD centres for gardens, and some food security beneficiaries supply vegetables to DSD soup kitchens or the Food Bank. ECD centres often have close relationships with local clinics to access health services for children in the centre, but the extent to which nutrition services (such as growth monitoring, deworming or vitamin A

supplementation) were part of these health services is unknown. There is no evidence that any of these initiatives, however, are implemented at any scale.

At provincial, district, and local levels, most respondents were able to speak knowledgeably about the nutrition interventions implemented by their specific government department, but few were able to comment on the adequacy of implementation for interventions outside their sector. This further speaks to a lack of linkages between government departments around food and nutrition and demonstrates the silo nature of implementation at all levels for the 18 interventions.

PARTNERSHIPS WITH NGOS/CBOS AND OTHER INSTITUTIONS

To address staff constraints in government services, many respondents recognise the benefit of partnering with NGOs/CBOs, including faith-based organisations, to expand coverage and service provision, particularly at community level.

Of the three departments, only DSD has an extensive network of NGOs and CBOs to implement its food access interventions (food parcels and soup kitchens). It also has a network of ECD centres that it supports, but only an estimated 10% of preschool-aged children in South Africa attend registered ECD centres supported by DSD, so there is room for expanding coverage. A shortage of Social Work Coordinators in WC spurred the province to engage NGOs for supporting referrals and linkages between ECD centres and other government services.

Also in the WC, a partnership with the University of the Western Cape secures additional support from students/interns who visit ECD sites once per quarter to give talks on healthy living and nutrition. There are also examples of local support for ECD sites, such as a nearby old age home donating extra vegetables and supplies to the ECD centre.

In the health sector, support groups and partnerships with NGOs/CBOs are more common with PMTCT services, where support groups give mothers additional breastfeeding and complementary feeding counseling (e.g. Mothers2mothers). There are also examples of nutrition-focused NGOs (e.g. Philani) working with DoH health facilities in EC and WC. Indeed, numerous health sector respondents noted the potential value of community-based support groups, NGOs, and CBOs in providing follow-up nutrition counseling and support as an effective means to counter staffing constraints in health facilities.

DAFF has few formal partnerships with NGOs for the delivery of its nutrition interventions.

A lack of NGO engagement limits the reach of nutrition interventions, especially those that are suited to implementation at community level, such as growth monitoring, vitamin A supplementation, Oral Rehydration Solution (ORS) and zinc, and nutrition counseling / education / support. But the absence of a funding framework and government resources for oversight and monitoring of NGO-based implementation inhibits more expansive engagement.

Recent experience from HIV/AIDS programme efforts in expanding HIV/AIDS care and support at community level is instructive in this regard. Recognising that health facilities could not adequately provide 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 nutrition interventions at community level in order to achieve the goals of the INP.

3.6 Beneficiary Responsiveness

Beneficiaries are generally responsive to government interventions around nutrition, particularly health and DSD Food Access interventions, and show no resistance to utilising the services.

However, in all four provinces (especially in the Eastern Cape), it was noted that there appears to be a stigma attached to the "porridge" provided as part of the TMS Programme due to its association with HIV/AIDS patients, and this inhibits beneficiary uptake of the intervention. In addition, among the beneficiaries who were familiar with the programme, there appeared to be some confusion about the entry /exit criteria and that it is a short-term intervention. In one KZN clinic, one mother who had been previously enrolled in the TMS, did not appear to have a clear understanding of why she was eventually stopped. She obviously was not adequately counselled and did not relate her being removed from the programme as a positive reflection of her nutritional status. This points to the need for better one-on-one nutrition counseling for those who are enrolled in intervention. In WC, some adults reportedly dislike nutritional supplements in the form of porridge, and both children and adults seem to dislike the taste.

Beneficiaries are also reportedly less responsive to interventions that promote household food production and breastfeeding practices, reportedly because of cultural and/or social values that inhibit uptake:

- For household food production / home gardens, some respondents spoke of the communities' lack of interest in home gardening, and a general preference among the general population for buying rather than growing food. Others offered an alternative perspective – namely that poor follow-on support from food security officers once seeds have been distributed as greatly limiting uptake of the intervention.
- For breastfeeding promotion, widespread cultural practices, social pressures from family members, and fear of passing HIV on to babies were commonly cited inhibiting beneficiaries' participation in exclusive breastfeeding.

Scaling up these latter interventions will require massive investments in persuasive communications to overcome resistance and change behaviours in the general public.

Although nearly all beneficiary focus groups (36/40) indicated that they would take their children to the local clinic in cases of no weight gain, health professionals note that many communities don't recognise the signs of poor growth, and that there is need for more intensive awareness building on malnutrition in order to build greater utilisation of services.

> *"People do not see moderate malnutrition; i.e. if a child loses weight it could be said that they're just growing up. This requires clinics to go out to the community and educate them."*

Lastly, beneficiaries' economic constraints (particularly in paying for transport to health facilities) was noted as generally inhibiting the uptake of facility-based nutrition interventions in rural areas. Because EC and KZN have significant rural populations with a poor network of public transport, these provinces are increasingly using CHWs and CCGs to extend nutrition programmes to households in a timely manner.

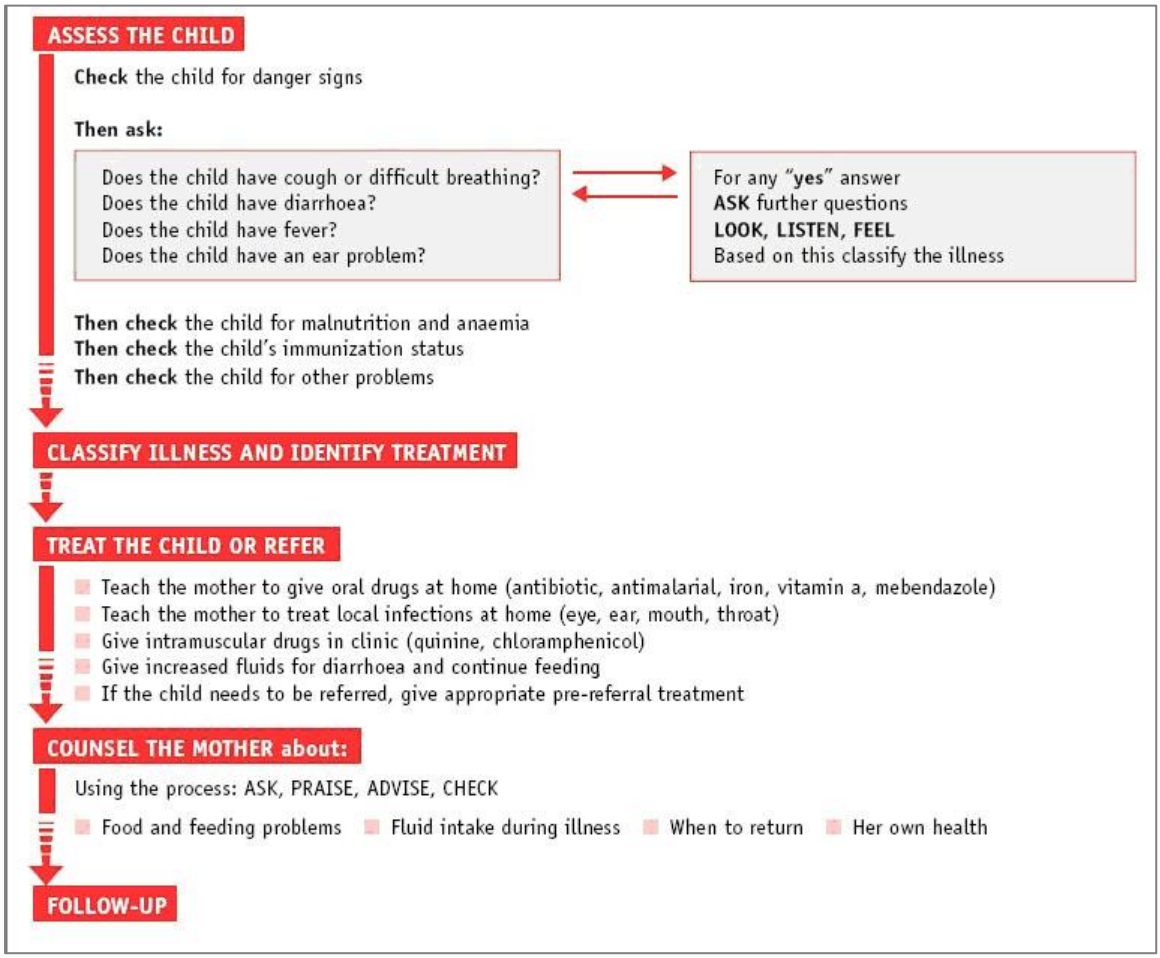
3.7 Communication

3.7.1 INTERNAL COMMUNICATION WITHIN GOVERNMENT

The most common channels of internal communication in government are dissemination of documentation (policies, strategies, guidelines, updates/circulars), and in-service training and supervisory visits. Most provincial, district and local-level respondents view these internal communication channels as sufficient to assist in implementing the various interventions. In the health sector, it was encouraging to find that, on average, key guidelines and strategy documents were available in 80% of the health facilities visited. However, a district respondent in EC noted even if the documentation is "pushed" effectively to lower levels, the busy schedules of personnel on the ground mean that they have little time to engage with the documentation and absorb the instructions. A suggestion was made to simplify the information

disseminated to lower levels by translating policies and guidelines into protocols or SOPs, preferably in the form of wall charts that can be easily accessed as shown below.

Figure 21. Example of a wall chart for nurses



Training and supervision are also commonly used methods for communicating new policies and strategies to staff. However, these are relatively costly methods, and many district and provincial managers across all departments noted that supportive supervision does not occur as frequently as it should due to staff shortages and lack of transport.

In contrast, national level government respondents cited poor internal communication as resulting in an information gap between national policies governing the nutrition interventions and the services actually provided at local level. One respondent stated that across all government departments there is generally poor communication around new or revised policies and initiatives, and this adversely affects implementation. This individual believes that communication with lower level staff needs vast improvement.

Feedback from lower levels is received both formally via monthly and quarterly reports, and informally through supervisory visits and occasionally through review meetings and trainings. However, a general lack of comprehensive data elements for monitoring most nutrition interventions limits the effectiveness of these feedback mechanisms, and several district and provincial managers expressed their dissatisfaction with the sufficiency of feedback.

3.7.2 External Communication to the General Public

A wide range of communication channels are used to promote nutrition interventions to the general public, and by and large communication is said to be credible, culturally sensitive, and disseminated in local languages, regardless of the channel.

In promoting its food access interventions, DSD has used road shows, awareness campaigns, radio advertisements, community referrals, and CHWs. Similarly, for household food production, respondents mentioned the use of a variety of communication strategies and channels, including workshops for communities.

DoH communication to the general public is mostly limited to IEC materials (posters and pamphlets), group health talks, and one-on-one counseling in ANC, PMTCT, maternity, and post-natal well baby clinics. Some health facilities clinics also promote community education and campaigns to increase the general public's awareness, home visits by CHWs/CCGs, community talks/dialogues, and radio spots or advertisements, but these were less commonly mentioned.

One successful example of the use of mass media to promote new health policies to the general public is seen in the EC. 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 also uses 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 KZN, an active communication campaign over the radio was designed to raise awareness about severe malnutrition. This was complemented by community nutrition outreach programmes using CCGs and road shows.

DoH communication around many interventions, especially breastfeeding, is largely "motivational" rather than "solution oriented" (e.g. addressing specific problems mothers have with breastfeeding. Given the social, cultural, and medical barriers to breastfeeding, there is a need for mass media communication that raises the general public's awareness around breastfeeding in order to counteract social and cultural beliefs that contribute to sub-optimal breastfeeding behaviours.

The relatively infrequent use of mass media for promoting nutrition was noted as limiting the government's ability to "focus and customise messages to targeted beneficiaries."

There is an opportunity for the government to establish a stronger "counter-marketing" strategy around the new International Code regulations 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, with the objective of replacing materials being provided by commercial manufacturers.

A complicating factor is the commercial food sector's influence on food and nutrition messages. Due to their intensive advertising, consumer perceptions are often more swayed by the intensive marketing of food companies than the government's messages on nutrition, especially for urban target groups. Given increasing obesity in South Africa, it is especially relevant to embark on better and more public education around nutrition.

3.8 Responses to the 17 Evaluation Questions

Responses to the 17 research questions are presented below.

1. Do relevant policies exist for the 18 nutrition interventions; have they been adopted by appropriate departments/levels of government; are they funded; and are they coherent across sectors? Are there policy gaps?

There are relevant policies governing health and health access nutrition interventions (DoH) and food production (DAFF). There are also policies governing ECD under which DSD's food access to ECD centres is covered. However, there appear to be no policies governing DSD's other food access interventions such as food parcels and soup kitchens.

Across all the relevant policies, gaps exist in specifically prioritising reduction of obesity and overweight. The focus in the policies is mainly on underweight and/or lack of food.

There is also a lack of coherence in the policies of the DoH, DSD and DAFF - the three main implementers of the INP. While food and nutrition security appears to be the link tying the various policies together, no specific and measurable goal unite the policies of the three departments and their respective effort to address food and nutrition security. In contrast, Brazil and Mozambique have identified "reduction of stunting" as the overarching goal to which all government department food and nutrition efforts are expected to contribute. Having a common, measurable goal lends coherence across the various food and nutrition security policies in these two countries and harmonises the efforts of the relevant ministries.

In South Africa, all policies governing food and nutrition security across the three departments underscore the importance of reaching vulnerable populations. However, while specific targets are included in DoH policies, no specific targeting of the most vulnerable (children under 5 and pregnant women) is evident in the policies issued by DAFF and DSD (except for the ECD policies)

2. 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?

The new regulations governing the inappropriate marketing of breast milk substitutes issued in 2012 are comprehensive and appropriate for enforcing the International Code. The passing of these regulations demonstrates the Government's leadership in establishing a legal framework for this component. While the regulations define the processes and responsibilities for enforcement, they only go into effect in 2014, and therefore it is not possible to determine if enforcement is consistent or effective.

There is an opportunity for government to establish a stronger "counter-marketing" strategy, particularly with private health practitioners. This would involves distributing non-commercial posters and educational materials on breastfeeding to the offices of paediatricians, family practitioners, obstetricians/ gynaecologists, and nurse-midwives, in order to replace the branded 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 materials provided by or bearing the logos of infant formula manufacturers. Furthermore, governments can strengthen whistleblowing procedures within companies, and implement prevention of code violations into the job descriptions of companies' senior representatives in each country.

It is worth highlighting that no policies or regulations currently exist which govern the inappropriate marketing of unhealthy (obesogenic) food to children. However, in light of the growing problem of obesity in South Africa, the DoH is currently considering new tax policies which would levy excise taxes on unhealthy foods while exempting healthy ones. Additional policy options around the marketing of unhealthy foods to children are presented in more detail in Annex 4 of this report.

3. 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?

Most facility-based nutrition interventions are integrated into the routine services delivered at clinics. However, as mothers tend to only bring their children to health facilities when their children are sick, the uptake of these interventions is generally low - particularly for the routine health promoting/monitoring or behaviour change interventions.

Table 12 below illustrates the interplay between demand and supply for several nutrition interventions. As can be seen, the demand for facility-based interventions targeted mainly to the sick child or pregnant mother tends to be higher than the demand for interventions involving health promotion or behaviour change. Furthermore, given the understaffing at most health facilities, interventions that involve education or counseling are not as readily provided as interventions that are "commodity-based". This, coupled with the fact that mothers wait until their children are sick to bring them to health facilities, highlights the need for to take key nutrition interventions closer to households and communities and raise their awareness of the importance of these interventions. The more mothers and care givers understand the benefits of routine nutrition and health interventions, the more likely they will be to seek these services and overcome such obstacles as transport, time, etc.

Table 12. Uptake of and Supply of Selected Nutrition Interventions

		Beneficiary Uptake	
		High Uptake	Low Uptake
Supply	High	BANC Management of Moderate Malnutrition Management of Severe Malnutrition	
	Medium	Food Parcels Soup Kitchens	Vitamin A Supplementation Deworming Growth Monitoring Water and Sanitation (Hygiene Education
	Low	ECD	Hygiene and Health Education Complementary Feeding Household Food Production Food Preservation

Growth monitoring does not pull mothers and children into health facilities like other interventions, such as immunisations or care for the sick child. Indeed, the sharp drop off in health services utilisation after 12 months (mirroring the immunisation schedule) is in keeping with the pattern of low demand among mothers and care givers for key nutrition interventions not directly related to the sick child. This highlights the insufficiency of counseling and education given to mothers and caregivers about the importance of growth monitoring. It also highlights the limited provision of growth monitoring services at community level currently provided by NGOs/CBOs. It is expected that with the eventual scale-up of PHC re-engineering, the delivery of routine health and nutrition interventions at community level will be significantly expanded.

In general, DSD food access interventions are not targeted to children under 5 or pregnant women, but they do reach children through ECD centres. However, ECD centres do not commonly enrol young children, and there are older pre-school children (3-4 years) than children 0-2 years benefiting from this support[lix]. Moreover, the ECD food subsidies are only provided to registered ECD centres which presently represents only a fraction of the ECD centres in operation. Hence the coverage for this intervention is low.

All management, delivery, and tracking of nutrition interventions for pregnant women and children under 5 in South Africa are intervention-specific and not integrated, whereby the household and its needs are more holistically supported by DoH, DSD and DAFF. Therefore it

is not possible to determine whether vulnerable households are receiving the full continuum of services and interventions needed to improve their nutritional status. A more holistic approach based on household vulnerability and determinants of malnutrition would allow for better targeting of vulnerable households and a more comprehensive and harmonised delivery of the various nutrition interventions. Such an approach would also facilitate the monitoring of household uptake and behaviour, in contrast to the current monitoring system which only monitors the supply of services and not utilisation.

An approach built on the household profiling activities currently in place, along with better integrated nutrition information systems and community based services, would allow the various nutrition interventions to be delivered in a better targeted and holistic manner. Such an approach also lends itself to more effective partnerships with NGOs as they can be called upon to attend to identified vulnerable households, and to assist in linking growth monitoring and household/community visits with other relevant services.

4. Are high impact interventions being prioritised in practice?

We have defined *prioritised* as services that are actually delivered to all or most eligible patients/clients as evidenced by coverage rates or other measures.

Seven of the 18 nutrition interventions which are included in the INP are considered high impact interventions and are all implemented by the DoH. As shown in Table 13 below, the high impact nutrition interventions are being prioritised with the exception of Complementary Feeding.

Table 13. Prioritisation of High Impact Nutrition Interventions

High Impact Nutrition Intervention	Prioritized	Comments
1. Breastfeeding support	Yes	Prioritised but suffers from the quality of counseling accompanying it.
2. Management of moderate malnutrition including targeted supplementary feeding	Yes	Prioritised though meal supplementation is not always limited to those who meet the criteria.
3. Complementary feeding	Partially	Not prioritised. Messages regarding continued breastfeeding after six months are not clear and messages regarding solid foods are not structured or standardised and are not given to all members of the household.
4. Food fortification (Vitamin A, Iron and Iodine)	Yes	Prioritised but lacks the effective monitoring mechanisms necessary to enhance compliance among all companies and small millers.
5. Micronutrient including Vitamin A supplementation	Yes	Prioritised but dependent on mothers/ caregivers bringing children to health facilities.
6. ORS and Zinc	Yes	Prioritised but affected by stock outs.
7. Management of severe malnutrition	Yes	Prioritised.

5. What interventions are being implemented effectively, what aren't?

The effectiveness of implementation of the 18 nutrition interventions, in relation to pregnant women and children under 5, was scored by examining the following elements deemed critical for implementation success associated with the moderating factors for policy implementation:

- Nutrition Specific or Sensitive
    - Nutrition-specific interventions address the immediate determinants of foetal and child nutrition and development such as adequate food and nutrient intake[lx].

  - Nutrition-sensitive interventions address the underlying determinants of foetal and child nutrition and development such as food security, adequate caregiving resources, and access to health services.

- Clear targeting of pregnant and children under 5
- Existence of guidelines, SOPs, manuals, etc.
- Sufficiency of human resources – in terms of numbers and skills
- Sufficiency of material supplies e.g. equipment, commodities, and IEC materials
- Sound M&E system with set targets for service delivery
- Targets being reached
- Service delivery linkages with other governmental departments
- Service delivery linkages with other partners (private or non-profit)

Using a scoring system that provided points for "yes" or "partially", we obtained an implementation score for each interventions as shown in Table 14 below. Half of the interventions (N=9), mostly "clinical" interventions implemented by the DoH and ECD food, received implementation effectiveness scores over 66%. But the remaining 9 had scores below 50%, and these include all the DoH behaviour change interventions, food access and agriculture interventions.

Table 14. Implementation Effectiveness Scores for the 18 interventions

	Nutrition Intervention * High impact interventions (Responsible Gov't Department)	**TOTAL SCORE** (% possible points)	**Comments**
1	**BANC** (Basic ante-natal care) – education and supplements, timing (DoH)	81.3%	Intervention is mainstreamed, prioritised, tracked through M&E. Staff are skilled, supplies are adequate.
2	**Food fortification** (Vitamin A, Iron and Iodine)* (DoH)	80.0%	Targets only partially being reached as small millers are not fully engaged, and insufficient monitoring of fortified products produced by large food companies.
3	**Early Childhood Development** (ECD) (food in ECD centres) (DSD)	75.0%	Targets are unknown, access to ECD centres is limited; MOH-DSD linkages are established.
4	**Management of moderate malnutrition** including targeted supplementary feeding*(DoH)	68.8%	Recording in the malnutrition registers is inconsistent; stockouts occur. Counseling is weak. Limited to no linkages with community-based workers (gov't or NGO) for referral or follow-up support.
5	Oral Rehydration Salts (ORS) and Zinc* (DoH)	68.8%	Indicator is incidence of diarrhoea - not service being provided and no measures of ORS or Zn provision. No targets for provision of this service. Staff knowledge variable. Stockouts occur. Space for ORS demonstrations limited.
6	Micronutrient supplementation, including Vitamin A *(DoH)	66.7%	Targets are not set for all micronutrients. Health worker knowledge around micronutrients is highly variable; stockouts occur; limited engagement with NGOs, DSD, or ECD for supplementation campaigns; Vitamin A target is low, and is being reached, but doesn't specify number of doses (Vitamin A).
7	Deworming (DoH)	66.7%	Target is not set for deworming, but assumption is that it is the same as Vitamin A. Target doesn't specify number of doses. Limited engagement with NGOs, DSD, or ECD for deworming campaigns.
8	Management of severe malnutrition*(DoH)	66.7%	This is delivered at hospitals, but hospitals were not included in data collection. Target around case fatality is tracked. Downward referral or follow-up support is lacking or limited. Linkages with (DSD) food access and DAFF food security not evident.

	Nutrition Intervention * High impact interventions (Responsible Gov't Department)	**TOTAL SCORE** (% possible points)	**Comments**
9	**IMCI** (Integrated management of childhood illnesses) (DoH)	66.7%	Some of the components of IMCI have targets, and some don't. There's some shortage of trained IMCI staff. There are no linkages with other gov't departments or partners. IEC materials around feeding sick children are lacking in many facilities. Counseling is limited.
10	**Growth monitoring and promotion** including the use of Mid-Upper Arm Circumference (MUAC) measurements (DoH)	50.0%	No indicator for tracking of the delivery of the service; GM equipment at facilities is not always available; limited routine GM services; when GM occurs, there is often inaccuracies in plotting and interpretation; and little attendant counseling. No linkages with community based services or other gov't interventions.
11	Access to (nutritious) food, food prices (DAFF)	50.0%	Zero-VAT rating provides everyone with a nutrition benefit. But even with zero-VAT rating, nutritious foods can be more expensive than non-nutritious food. Taxation policies can be refined to be more nutrition sensitive.
12	Breastfeeding support* (DoH)	44.4%	The EBF goal is not being reached. There are limited linkages with Department of Public Service and Administration (DPSA) around workplace opportunities, with municipalities around the monitoring of the new Regulations, and with DSD around community based BF support (EC only). Few if any breast pumps, IEC materials, etc. An education campaign aiming at addressing cultural beliefs regarding expressed breast milk (and broadening access to breast milk by mothers who cannot breast feed) should also be considered.
13	Complementary feeding* (DoH)	37.5%	Little to no evidence of implementation. No linkages with other gov't departments or other partners. Insufficient staff to do counseling.
14	**Food access** (e.g. food parcels, soup kitchens) (DoH)	33.3%	Intervention is focused on quantity of food and not quality. No nutrition focus.
15	**Food security** (output 2 of outcome 7 in the National Priority Outcomes) (DRDLR/DAFF)	25.0%	Records based on households, but no specific targeting of those w/ pregnant women or young children. Staffing in short supply everywhere. No to limited linkages with other gov't departments or partners.
16	Nutrition education and counseling (part of all of these) (DoH)	22.2%	No targets established, no or very limited linkages with other gov't departments or partners for outreach of intervention. Insufficient IEC. Insufficient knowledge among health care workers around important counseling topics.
17	**Improving hygiene practice** (including in relation to water and sanitation) (DoH)	18.8%	Although the supply of water and sanitation has increased, there's little information about the hygiene education that is meant to accompany toilet construction. Few respondents could comment on this intervention, but the literature suggests that little education is being done.
18	Household food production and preservation (home gardening) (DAFF)	18.8%	Although both DAFF and DSD provide this intervention, coordination and linkages between the 2 is not evident. Both have staff shortages. There are limited to no linkages with other partners.

6. Why are some interventions not being implemented effectively and efficiently, and what is needed to strengthen, upscale, and sustain them?

The aggregated implementation scores from the data presented in the previous question show that the enabling factors contributing to strong implementation relate to nutrition specificity and sensitivity, clear targets for pregnant women and children under 5, and SOPs and guidelines. The impeding factors that tend to weaken the effectiveness of implementation concern limited

linkages with other government departments, limited partnerships with NGOs, insufficient HR (numbers and skills) and inadequate communications around the interventions which leads to poor participant responsiveness/uptake.

Table 15. Average score of elements across the interventions

Moderating Factors	Elements of Effective Implementation	Ave Score Across the 18 interventions
Policy Content and Fit	Nutrition Specific/ Sensitive	97%
	Clearly Targeted at Pregnant Women and Children U5	72%
Capacity to Implement	SOPs, Guidelines exist	74%
	Sound M&E System with set targets for services delivery	50%
	Sufficient material supplies	45%
	Sufficient HR (numbers and skills)	38%
Participant Responsiveness	Targets being reached	38%
Institutional Context and Communication	Service Delivery Linkages w/other Gov't Departments	23%
	Service Delivery Linkages w/other partners (private or non-profit)	27%

From interviews during fieldwork, other common inhibiting and enabling factors were mentioned, as listed below.

INHIBITING FACTORS:

Staff and Institutional Capacity

- Shortage of staff, especially for those nutrition interventions that rely mostly on counseling, education, and support
- Insufficient supportive supervision for nutrition, due to staff shortages shortage, and transportation constraints
- Lack of, or insufficient, knowledge and understanding of nutrition (and counseling) among service providers and supervisors
- Attrition and redeployment of staff after receiving training
- Lack of job aids to guide the health worker in the delivery of behaviour-based nutrition interventions
- Communication is focused on "selling" nutrition rather than providing practical advice for changing behaviour
- Poor stock management that leads to stock outs of key nutrition related materials
- Insufficient indicators for tracking the delivery of nutrition services and their effects on nutritional status

Integration of Nutrition into Interventions

- Nutrition not considered a core function by health facility, social development and agriculture staff
- Lack of nutrition focus in food and agricultural interventions
- Poor attention to quality of food parcels

Social and Cultural Factors

- Cultural and social influences that counter health-promoting messages, especially around infant and young child feeding.
- Mothers' health seeking behaviours – they only come to facilities for immunisations or when their children are sick. This leads to a gap in health service for children between the ages of 1 and 2 and to a lesser degree children between the ages 3-5, although some of these are captured in ECD where there are linkages between DoH and DSD.

Implementation Models

- Limited engagement of community-based actors to extend the reach of nutrition services to community level
- Limited community-based delivery of nutrition interventions by CHWs (although this is changing given PHC re-engineering)

ENABLING FACTORS:

- Importance given to nutrition at a strategic level – at provincial level, nutrition as an integral part of their War on Poverty, and a common understanding of the central role that nutrition plays in poverty alleviation (this has been done in KZN).
- A common operational plan and approach across sectors (as seen in KZN with OSS).
- Use of community-based workers to extend the reach of services to households and communities where appropriate (e.g. KZN and EC).
- Examples of coordinated case management at local level for food insecure and malnourished households and individuals (such as KZN OSS).
- Use of mass media communications and road shows to spread "nutrition" messages (such as in KZN)
- Extensive use of wall charts or protocols to make guidelines more accessible to time-constrained staff

TO STRENGTHEN, UPSCALE, AND SUSTAIN:

- At national level, the establishment of a coordination mechanism above the line ministries that facilitates a clearer common vision around a measurable and compelling nutrition goal (e.g. "reduce stunting" as seen in Mozambique and Brazil).
- The development of a common national strategy, operational plan, and indicators that facilitate sufficient resources for implementation in a coordinated fashion at national, provincial, district, and service delivery levels

7. How far is nutrition mainstreamed into the work of relevant services which impact directly on children?

Overall in the health sector, nutrition is better mainstreamed when it is part and parcel of more "clinical" health services; but when nutrition support, education, or counseling is required for behaviour change, then the intervention is not mainstreamed. One exception is growth monitoring (a diagnostic "clinical" skill) which is not well mainstreamed, possibly because nurses rely on visual assessments of a child's growth rather than specific weight and height measures, or because they haven't been well trained, or because growth monitoring is insufficiently integrated into standard operating procedures and protocols for IMCI and other child services.

In the social development sector, there is a recognition of the importance of food and nutritious food for young children in ECD centres, and therefore there has been an effort to incorporate nutrition support through the funding of ECD centres and the DoH guidelines. However, DSD's

food access interventions fail to be mainstreamed due to the lack of guidelines and monitoring systems that address the quality of food provided, and the lack of specific targeting of young children who are most vulnerable to malnutrition.

In the agriculture sector, there is no nutrition sensitivity in the design of the programme or the targeting of households with young children.

In addition, little to no nutrition counseling or education is carried out in the social development and agriculture sectors, resulting in many missed opportunities for increasing awareness of the importance of nutrition and for influencing nutrition behaviours.

8. Are there appropriate plans to implement these nutrition interventions, are they included in departmental strategic plans, APPs and operational plans?

In the health sector, nutrition is included in DoH strategic plans and annual performance plans (APPs) as a separate line item. However, this line item is generally small and, given that many of the nutrition interventions are integrated into the routine services for children under 5 delivered at the facility level, it is difficult to determine what additional resources are available to nutrition aside from this amount. Moreover, it is not possible to determine the time allocated by nursing and other staff to nutrition interventions. Not all DoH APPs contain targets for nutrition services, and this makes it further difficult to determine the adequacy of planned resources allocation.

Both social development and agriculture have strategic plans that broadly address food access and food production interventions. Furthermore, the APPs for these two sectors contain targets for food access and home food production interventions. However, these are not based on nutrition measures (e.g. stunted children); rather proxy measures (poverty) are used to determine who is eligible; and within the pool of people who qualify, there's no additional attempt to target the most vulnerable (impoverished infants/children and pregnant women). In addition there is a lack of attention given to the quality of food disbursed or grown.

9. Is there appropriate leadership for nutrition at the respective levels and are they empowered to play that role?

At national level, leadership for nutrition is specific to each line ministry. There is no explicit vision or leadership for nutrition at a level above line ministries, and this may partially explain the results seen for poor coordination of nutrition overall.

The DoH Minister's recent declaration on breastfeeding promotion spurred implementation of breastfeeding counseling throughout the health system. But he has given no other nutrition intervention comparable emphasis, and as a result nutrition is somewhat lost amidst the Department's other health priorities related to HIV, TB, and PHC reengineering. At provincial level, however, it is clear that when the importance of nutrition is recognised by leaders above the line department (e.g. the provincial government), departmental leadership for nutrition can flourish as is the case with KZN. Variance in DoH leadership at provincial level is also related in part to "where" nutrition sits in the organisational structure. When nutrition is positioned at the sub-directorate level or lower, there is a sense that nutrition is not given the same importance as other heath programmes, especially HIV.

The leadership for food security has been seen to be lacking at national and provincial levels, and as a result there is a lack of confidence in the vision surrounding food security. However, the recently revised DAFF strategy clarifies the vision for food security in the country. Unfortunately, this does not include any reference to nutrition.

DSD has a clear vision for "food for all" and strong champions at national and provincial levels. But the lack of focus on nutritional quality and dietary diversity diminishes the strength of the Food Access programme.

10. Are there relevant workers (not necessarily professional dieticians or nutritionists) to address nutrition-related interventions?

Respondents from all sectors report staff shortages and the need for more nutrition-trained personnel, especially for nutrition monitoring. While many respondents believe that more nutrition professionals should be hired to fill this need, the example of KZN suggests emphasising the use of community-based workers, either government employees like CHWs or contracted NGOs workers, to provide these services on behalf of DoH, DSD, and DOA. But oversight and monitoring by nutrition-trained supervisors is crucial to ensuring quality services delivery – and presently there are insufficient numbers of nutrition-trained supervisors to play this role across most of the 18 nutrition interventions.

In the agriculture sector, most DAFF food security staff at ground level are food production agriculturalists (often former farmers) with little to no understanding of how nutrition fits in the larger food security picture.

11. 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?

Personnel charged with delivering nutrition interventions across all sectors generally lack sufficient knowledge and skills. Most nurses in health facilities, except for those in KZN, often knew when to give an intervention but not always why, suggesting that nutrition knowledge among nurses is somewhat superficial and based on rote learning. This lack of knowledge was consistent with whether or not they had received any nutrition training in the previous two years.

In addition to insufficient training of existing personnel, frequent staff changes of trained staff due to attrition or rotation is a barrier to retention of skills at service delivery points.

Furthermore, supervisors need more nutrition training and understanding to effectively support implementation at the service delivery level.

12. Do the PHC and other service facilities have the necessary equipment, guidelines, protocols, and supplies to deal with nutrition in under-five children?

As shown in Table 11, most health facilities have the necessary equipment, guidelines and protocols to address nutrition in under-five children. However, stock outs of key commodities, a general shortage of IEC materials, and lack of adequate infrastructure are challenges faced by many health facilities.

Most facilities visited had the necessary medicines and supplements to address the nutrition needs of children under 5, with the exception of ORS and Zinc – both used to treat diarrhoea, a major cause of childhood illness and contributes to malnutrition. Over a quarter of facilities did not have ORS on the day of the visit while almost 40% did not have Zinc. However, the problem of stock outs is not limited to these two commodities as many facilities reported experiencing regular stock outs of other nutrition commodities as well.

Most of the facilities visited (79%) had posters and pamphlets promoting exclusive breastfeeding highlighting the attention being given to this intervention. Notably, however, IEC materials on “feeding the sick child” were generally missing in facilities with only a quarter (26%) having such materials. This is of concern given that mothers tend to visit facilities mainly when their children are sick thus a key opportunity is lost to communicate this important nutrition message. Over a quarter of facilities visited did not have sufficient numbers of consultation rooms while almost 30% lacked appropriate space for counseling. This, coupled with the general lack of IEC materials, may partially explain the low delivery of nutrition education and counseling in health facilities.

13. Do service standards/norms exist for relevant interventions?

In the health sector, there are service standards and norms for most interventions, but there are a few where these are missing (e.g. growth monitoring and nutrition education and counseling). However, even if the norms and standards exist, it doesn't mean that health workers fully engage with them. To facilitate a better understanding of the service requirements, more user friendly SOPs or protocols (e.g. wall charts) based on the life stage of the client would bring more cohesion and coherence to the interventions.

Norms and standards were not available for the DSD food access, although there are norms and standards for ECD in the *Norms and Standards and practice guidelines for the Children's Act*.

There do not appear to be any DAFF norms/standards around household food production interventions.

14. Are resources allocated appropriately and sufficiently?

We could find no international benchmarks for the appropriate staffing and funding of nutrition interventions in a country. Therefore, it is not possible to determine if financial and human resources allocated to nutrition are sufficient.

Most of the resources allocated to nutrition are "blended" into the budgets of other programmes. While this is appropriate for achieving integrated services delivery, it does make it difficult to determine if resources are adequate, particularly given the lack of nutrition targets in the APPs across all sectors and provinces.

The answer to this question could be facilitated, if all APPs from DoH, DSD, and DAFF contained relevant nutrition targets.

15. 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 (e.g. community-based services such as nutrition advisors, and platforms for community involvement)? How extensive are these?

In the health sector, community-based delivery is generally limited, and most nutrition services are facility-based. However, in more rural areas of KZN and EC, community-based staff are increasingly being used to extend the reach of services. Through PHC reengineering, there is the opportunity to provide nutrition monitoring services at community-level, along with other key child health services. Indeed, KZN has its own community-based IMCI guidelines.

Food Access and Food production interventions operate at community-level, but they are not community-based, as staff travel to communities to delivery services. As a result transport issues do at times pose a constraint in the continuity of services in communities.

DSD is more engaged with NGOs in community-based service delivery than the other departments, but monitoring of implementation is a significant challenge.

Engagement of NGOs could be greatly expanded in the health and agriculture sectors, particularly if an effective funding and monitoring mechanism were established to ensure quality service delivery and coverage.

16. 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?

At national strategic level, the DAFF-led INP coordination is not functioning as intended. Moreover, implementation and coordination of the INP is constrained by the lack of a common operational plan and no coordinating body that sits above the line ministries, or that involves civil society and the private sector.

At provincial level, WC, EC, and KZN have inter-departmental coordination mechanisms, but their effectiveness varies. The OSS and PIAPS mechanisms in KZN and EC respectively are situated above the department level and are intended to link and harmonise the efforts of line ministries' efforts to alleviate poverty with an emphasis on nutrition and food security. The KZN-OSS mechanism further facilitates a coordinated response at the ward level using a household-based case-management approach.

DAFF may not be in a position to provide a wide range of nutrition-specific interventions, given its recent shift in food security strategy. But the food security programme could play a stronger role in promoting "nutrition-led agriculture" whereby food production goals and activities are better aligned to better contribute to nutrition security.

Referral mechanisms within DOH generally work well. DSD and DAFF services generally do not require internal referrals.

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

There is a lack of common metrics for the INP that consolidates the measurements of nutrition implementation from different sectors.

There is a general lack of routinely-reported indicators or data points to track the supply of nutrition interventions delivered (disaggregated by key target groups) as well as the effects of these interventions on nutritional status. The lack of these indicators generally hampers the ability of management to make informed decisions around services delivery, and to take timely and informed corrective actions.

Even where indicators exist there are data quality concerns, particularly around accuracy, timeliness, and completeness of the data. In addition, many existing indicators cannot be disaggregated by the key target groups of women and children under five.

Finally, many indicators collected at provincial level are not reported to national level, and this limits national's ability to guide and support implementation from a policy or strategic perspective.

4 CONCLUSIONS

Nutrition programmes have been in place in South Africa since the 1960's. In the mid-1990's the Government introduced the Integrated Nutrition Programme (INP) which aimed to improve nutrition through emphasising 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.

However, South Africa has made limited progress in improving child nutrition since 1999. Stunting rates remain high at 21% of all children under five, and poor nutrition is the principal factor in deaths of South African children under five. In the long-run, the high levels of stunting among South African children will negatively affect longevity, educational outcomes, productivity and economic growth. In addition, South Africa is in the midst of a nutrition transition, where both over nutrition (i.e. obesity) and under nutrition (i.e. stunting and underweight) are found amongst children under 5. South Africa's child nutrition trends since 1999 compare unfavourably to five comparison countries with similar economic and/or geographic characteristics.

The DoH, DSD, DAFF, and DRDLR each have sufficient policies and strategies for guiding their respective portfolio of nutrition interventions. However, the evidence from this evaluation points to unequal commitment to nutrition across the three departments with varying leadership, management, planning, budgeting, and staffing. The absence of a coordination body above the line ministries (to which each department would be held accountable) – along with the absence of consolidated operational plan with a common goal, clear objectives, and common metrics for tracking food and nutrition interventions across all sectors and all levels of implementation – has led to a silo'd and somewhat fragmented approach to addressing child nutrition in South Africa.

Staff shortages, insufficient nutrition training, and generally limited nutrition knowledge constrains the effectiveness of implementation across all departments. In addition, there is an absence of coordinated service delivery at local level whereby social workers, health workers, and food security personnel share information and harmonise their responses. There are also few partnerships with NGOs and CBOs across all sectors, except for DSD's food access interventions which are largely implemented by NGOs and CBOs. Both these factors limit the reach and uptake of the 18 nutrition interventions, particularly those interventions focused on counseling, education, or behaviour change which are well suited to be implemented at the community level (such as home gardening, complementary feeding support, hygiene and health education, food preservation, among others). While other successful countries have strong partnerships with civil society for both implementation and participation in strategic advisory bodies, South Africa has neither.

Beneficiaries are generally responsive to government nutrition interventions, particularly DoH health services for the sick child and DSD Food Access interventions, and they show no resistance to utilising these services. However, beneficiaries are less responsive to household food production and breastfeeding promotion, reportedly because of cultural and/or social values that inhibit uptake. Scale-up of these interventions will require massive investments in persuasive communications to overcome resistance and change behaviours in the general public. However, the government's relatively infrequent use of mass media for promoting nutrition limits its ability to "focus and customise messages to targeted beneficiaries",

particularly in light of intensive marketing by food companies (of non-nutritious foods) to the general public.

Utilisation of routine nutrition services for children under 5 decreases significantly after 12 months of age. Reasons cited include the lack of appreciation for these interventions relative to services for the sick child as well as transport challenges. This highlights the insufficiency of counselling and education given to mothers and caregivers about the importance of growth monitoring and other routine nutrition interventions intended for children under 5. It also highlights the limited provision of these services at community level.

Most health facilities have the necessary equipment, guidelines, and protocols to address nutrition in under-five children. However, frequent stock outs of key commodities, a general shortage of IEC materials and lack of adequate infrastructure are challenges faced by many facilities.

Food access and food production interventions (including food security) primarily focus on the quantity of food provided with limited attention to the quality and nutrient-density of the foods. This is reflected in the lack of guidelines and monitoring systems addressing the quality and diversity of food included in the various interventions. DAFF's food security strategy has focused on commercialisation and does not cover nutrition in a substantive way. In contrast, three of the five comparison countries (Brazil, Mozambique and Malaysia), have a defined focus on improving the quality of diets and dietary diversity, in addition to increasing the quantity of food consumed.

Regulations exist to govern food fortification and the inappropriate marketing of breast milk substitutes. The presence of these regulations underscores the South African government's commitment to addressing malnutrition. However, the food fortification regulations suffer from lack of effective monitoring mechanisms to ensure compliance, and the monitoring of the regulations on marketing breast milk substitutes has not yet started. In addition, no policies or regulations currently exist which govern the inappropriate marketing of unhealthy (obesogenic) food to children.

5 RECOMMENDATIONS

R1. According to the most recent national data (SANHANES, 2013), 26.9% of boys and 25.9% of girls aged 1-3 years old are stunted, which has increased from 2005. The high levels of stunting are creating a long-term and debilitating problem for the country in terms of longevity, educational outcomes and productivity of people, and its related contribution to economic growth. **Nutrition of under 5s should be elevated to the level of an output of Outcome 2 on Health, and so included in the Medium-Term Strategic Framework and the Delivery Agreement.**

R2. **Develop a well-defined Nutrition Plan for nutrition outputs across all sectors** that operationalises national priorities and investments in nutrition to achieve integrated and consolidated goals (including an explicit goal to reduce stunting in children under 5), objectives, activities, targets, and budget at all levels national, provincial district, facility and community. This plan should be developed in time for the approval of the Medium Term Strategic Framework (MTSF) after the elections, and its subsequent cascading into strategic plans. This plan should:

1. Include common, measurable goals to create coherence across the various food and nutrition security policies, in the short, medium and long-term.
2. Re-configure or consolidate service-specific policies, strategies, and guidelines along life cycle stages, rather than basing them by the intervention (Figure 14). This could help health workers to understand all the elements required in interacting with a client of a certain age, as well as to facilitate integration of nutrition into service provision.
3. DoH, DSD, and DAFF should work together to plan and then provide a comprehensive package of services to the vulnerable families and communities. Referrals and linkages between the different departments' services depend on close communication and integrated information systems to track the delivery of services as well as progress in remediating the nutrition problem. The KZN OSS is an example of this type of integration.
4. Communicate effectively about the Nutrition Plan across sectors and levels of government (national, provincial, municipal, district, facility, community).
5. National Treasury is doing an expenditure review of nutrition and this should be done quickly to inform this planning process and to revise budgets for nutrition.

R3. As part of the Nutrition Plan create common indicators for tracking Food and Nutrition across all sectors with a common and consolidated M&E framework for tracking both the delivery and the effects of nutrition interventions prioritised under the Plan. This should include:

1. Creating Sensitive Indicators to measure the outputs of nutrition programmes: particularly food fortification; micronutrient supplementation, ORS, Zinc, breastfeeding and complementary feeding; as well as changes at outcome level in terms of changed practice.
2. Indicators need to be able to be tracked for priority groups including pregnant women and children under 5, in both administrative data and surveys. Work with Statistics SA and the Demographic Health Survey and SANHANES to see how there can be better tracking of changes in practice of these groups.

R4. Elevating nutrition to an output should be accompanied by placing nutrition to at least a cluster manager in national DoH and to a **directorate level at provincial DoH.** Districts

also need a nutrition-trained person. Other national and provincial departments need a nutrition-trained focal person to manage their contributions. Vacant posts must be filled. National DoH should track this.

R5. **Stronger coordination** is needed of the implementation of nutrition interventions by the individual line ministries responsible for the nutrition response, and ensuring that the nutrition programme plan is being followed. The **national DoH is the natural champion** as most interventions are within its domain. Support is needed from the Presidency to elevate the political profile of nutrition. An integrated programme plan is needed to facilitate cross-sectoral collaboration, and facilitates more effective consolidated planning, budgeting and oversight of each ministry's performance in achieving nutrition goals. DPME needs to look at lessons which can strengthen programme coordination mechanisms.

R6. Establish a **National Nutrition Council** as a coordinating council, like SANAC for HIV/AIDS, which has broad representation from key government sectors and programmes, civil society, suitable involvement of the private sector, to mobilise all sectors around nutrition. The DoH will provide the secretariat for this. As has been done for maternal mortality and morbidity (COMMiC), this Council should be served by a committee of experts – a Committee on Nutrition (COMMoN). Other committees addressing infant and child health should also have a nutrition focal point.

R7. Change **focus of services and communication** across relevant sectors to focus more on promotion and prevention, exclusive breastfeeding, complementary feeding, dietary diversity, hygiene education and to help create an enabling environment:

1. DoH to use real **change management efforts** to change behaviours (e.g. to ensure exclusive breastfeeding for 6 months). Do not expect only counselling of mothers to effect practices; their support network (grannies, husbands, community leaders) must understand and support the new practice. Examples for achieving this include the use of TV and radio as platforms to educate about sound nutrition. Make use of civil society and CHWs/CCGs to provide relevant nutrition counselling and to help change behaviours and attitudes at community and household level. This should be a key focus of the Nutrition Plan.
2. DoH to create a specific, well-defined, dedicated **health promotion and communication strategy on nutrition for under 5s**, as happened for HIV/AIDS. At the moment, nutrition education (forming part of other strategies) is not reported on as an individual outcome and therefore not prioritized. Develop relevant multi-media IEC interventions (e.g. radio in EC) and materials to address incorrect or negative perceptions about nutrition interventions e.g. perceived stigma around the use of targeted supplementary feeding (TSF), and counter messages to food advertising. Use the public broadcaster (both TV and radio) to educate pregnant women and children under 5 about the importance of sound nutrition, use celebrities to elevate the status of breastfeeding, and encourage good nutrition practices targeting all members of the family.
3. DoH to address the growing problem of **overweight and obesity** among children under 5 years of age (18.9% overweight/4.9% obesity in girls and 17.5% overweight/4.4% obesity in boys aged 2 to 5 years), and promote exclusive breastfeeding and appropriate infant and young child feeding.
4. Incorporate private providers, NGOs and other civil society actors in behaviour change efforts, and in the proposed National Nutrition Council.

5. DoH to analyse the SANHANES data to see if there is a particular problem for teenage and working mothers in breastfeeding, which may need targeted responses.

R8. **DoH to use the PHC reengineering process to ensure clinics and CHWs** provide growth monitoring and provision of nutrition advice and targeted supplementary feeding and provide appropriate space for counselling:

1. Ensure there is a nutrition-trained person in the PHC teams, ideally nutritionists or dieticians. Training of these specialists has been scaled back because there has been no market for these staff even though the need is great.
2. Ensure pregnant women and children under 5 receive regular health services, either from clinics or CHWs/CCGs etc.
    i. Develop **"a one-stop" approach** for delivering routine health/nutrition interventions at community level to provide mothers/care givers a full range of services during one visit. Such an approach complements the *eventual* scale-up of PHC re-engineering.
    ii. Use **Community Level Assistants** (CHWs/CCGs) as in KZN to identify, refer, and follow-up underweight, stunted and overweight children and pregnant and lactating mothers and give talks to communities on nutrition and advice to mothers on food preparation and appropriate feeding practices. Training needs to be improved to ensure that quality growth monitoring is being done. This model is equally relevant to other sectors such as community food gardening advisors, community animal health workers. DPME should evaluate the optimal use of community-based workers in different sectors and identify lessons for widespread scale-up of such models.
    iii. Similarly, to make this work, there will need to be **an expansion of NGO involvement**. In the health sector such partnerships are more common with PMTCT services, but there are some nutrition-focused NGOs such as Philani working with health facilities in EC and WC. DPME should conduct an evaluation of the experiences of NGO delivery of services for government and how these can be scaled-up effectively, for nutrition but potentially for other sectors.
3. As access to supply systems expands, DoH to engage Treasury and DSD to consider the possibility of conditionality such as adherence to basic health monitoring (i.e. BANC, vaccination schedule, and growth monitoring) to social grants.

R9. Promote use of healthy and diverse food:

1. DSD to consider options to **restrict use of vouchers to prescribed food options**, e.g.by linking voucher use/parcels only to fortified staple foods and VAT zero-rated food.
2. DoH to develop guidance on food quality and diversity for DSD interventions such as soup kitchens/ECD and for DSD/departments of agriculture for good gardens.
3. Rather than focusing on the quantity of food consumed, departments of agriculture should change strategies to focus on **diversified diets** by emphasising the production of special crops with high nutritional value (e.g. Orange-fleshed Sweet Potato, morogo) and promotion of local food production and preservation of food, as well as goat's milk.

4. Establish and enforce regulations to **reduce children's access to unhealthy foods**, including restricting fundraisers from selling unhealthy food at functions; adding taxes to unhealthy food, regulating fast foods; prohibiting sweets and unhealthy foods at supermarket checkout aisles; and prohibiting unhealthy food at ECD centres. Consider other policy options as indicated in Annex 4. Use the National Nutrition Council to name and shame companies promoting inappropriate food. Ensure **food companies adhere to food fortification regulations** and other codes of marketing practices. DoH to establish linkages with the National Consumer Commission (NCC) to encourage whistleblowing on companies that transgress regulations on inappropriate marketing of food to children. Violations should be treated seriously and the companies should be charged accordingly.
5. DoH to review the micronutrient programme to (i) use CHWs/CCGs to distribute Vitamin A twice per year, (ii) optimise the levels of bioavailable micronutrients in fortified foods and explore alternative delivery mechanisms, e.g. multiple micronutrient powders; (iii) DSD to use DoH-approved fortified products, (iv) explore more effective mechanisms for engaging small millers to fortify grain, or by promoting household fortification.

R10. Improve Knowledge, Skills and Attitudes:

1. Improve pre- and in-service nutrition **training** of health, agriculture and social development employees (including ECD Managers) to expand knowledge and skills (e.g. diagnosing malnutrition; nutrition education, and teaching communities to plant and care for gardens).
2. Levels of awareness of nurses of key nutrition messages only averaged 50% in the 3 provinces apart from KZN, and means to ensure regular training is needed. Nutrition should be included in pre-service training and regular updating of health professionals including doctors and nurses through strong partnerships with academic institutions. Academic institutions should be involved as with the example of the UKZN working closely with the DoH in KZN, and University of WC students giving talks at ECD centres.
3. Create Standard Operating Procedures (SOPs) for all nutrition programmes specifying the steps to be taken and referrals/follow-up. These SOPs should be published in wall charts for easy reference. This is particular important around behaviour change interventions e.g. breastfeeding counselling and support, hygiene education.
4. Expanding the use of CHEs/CCGs and support groups can take off some of the load from nurses and provide them with more time for counselling, and additional support. KZN has allocated dedicated nutrition advisors in every clinic, as well as CHWs trained in nutrition.

R11. Improve focus on food security:

1. Food security should be a sub-output of the main nutrition plan with some standard indicators. There is a challenge of who is the right champion for this. DAFF's food security strategy has focused on commercialisation and does not cover nutrition in a substantive way. However even supporting household subsistence production requires technical skills. The key champion for food production for subsistence needs to be clarified and if it is to be DSD then significant technical expertise needs to be provided.
2. A review of the experience of NGOs supporting food gardens in SA should be undertaken and a major new programme designed, using NGOs and community-

extension mechanisms. There is extensive experience internationally in doing this at scale (e.g. PRADAN in India) which should be brought in to assist in the planning.

3. Support for food production should include nutritious indigenous foods (e.g. morogo, orange sweet potato), as well as small livestock. DSD food parcels should contain only nutritious foods including fresh produce procured locally e.g. through cooperatives.
4. DSD should increase registered ECD sites and learners subsidised, thus improving their access to food. The menu guidelines must be followed and implementation monitored.
5. There is a need to standardise measurement of food security to incorporate nutrition indicators at national, provincial and district levels, including for impact indicators such as level of stunting. DAFF should work with DoH to do this.

R12. Reduce frequent **stockouts** for food supplements, ORS, Zinc, as well as equipment such as breast pumps and posters. The budget needs to be ring-fenced as a non-negotiable.

R13. At Provincial level, DSD to establish with the War on Poverty unit in DRDLR a **case management approach**, based on household vulnerability and determinants of malnutrition. This would allow for better targeting of vulnerable households and a more comprehensive and harmonised delivery of the various nutrition interventions. This approach is being used in KZN and it seems to be working at a provincial and ward level in DoH, but less so at district level and with the provincial department of agriculture. Such an approach could also facilitate the monitoring of household uptake and behaviour, in contrast to the current monitoring system which only monitors the supply of services and not utilisation. A particular target would be pregnant and breastfeeding women and children U5.

1. Evaluate the KZN experience to identify lessons; if proven to work well, adopt the model.
2. There is duplication of households and communities profiling between DSD, DRDLR, DAFF, and DoH. A standard approach should be used and captured in a common database. Doing so will eliminate multiple profiles and better integrate services. Ensure referrals are tracked and followed and successfully addressed. SASSA cards provide the opportunity to track vulnerable children and resources provided;
3. There should also be tracking of severely malnourished children leaving hospital to ensure that the family are linked to food and nutrition support.

Annex 1: Full Terms of Reference

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 incl Vitamin A supplementation*	Health
ORS and Zinc*	Health

Interventions to cover	Department responsible
Management of severe malnutrition*	Health
Management of moderate malnutrition incl 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 (e.g. 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?

[1] A list will be provided

[2] Note some work has been happening in terms of food control 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?
    - 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 (e.g. 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	What skills and support do we need to ensure we can deliver services appropriately	Recognising their shortcomings Motivate for the support they

User	Key question	How they may use the evaluation results
level		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 nutrition What type of partnership with government is appropriate to promote child nutrition?	Refocusing products and services 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 e.g. in middle income countries	

Annex 2: 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.

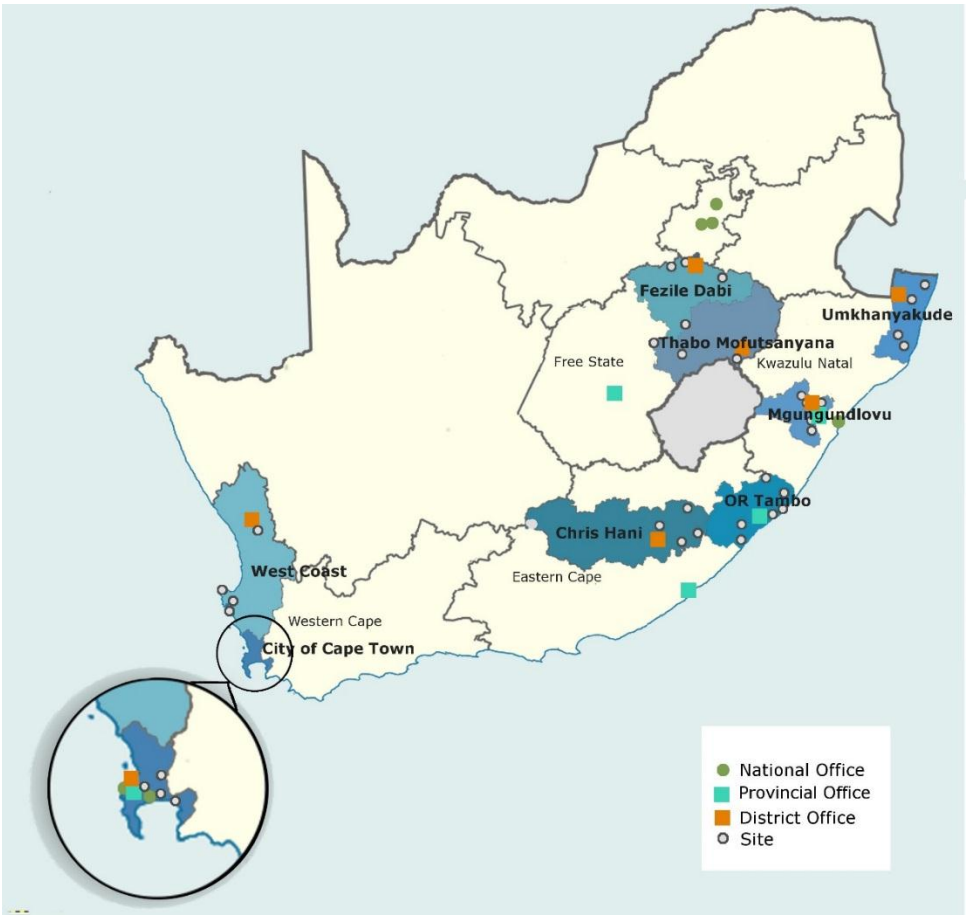
Districts included in the sample

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

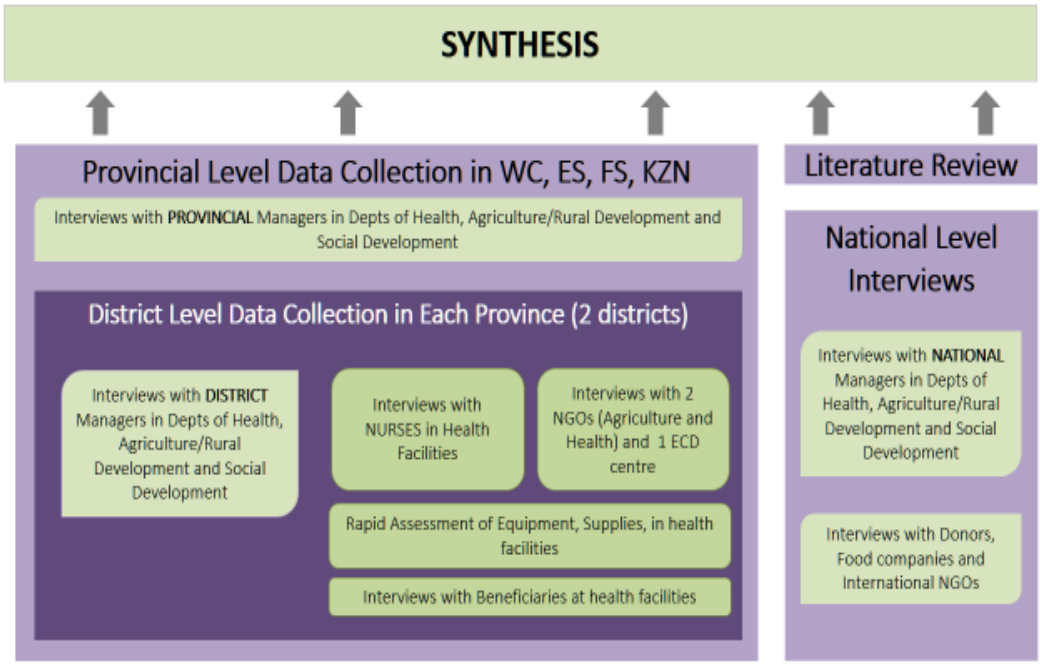
DATA COLLECTION METHODS

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
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		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.

Annex 3: Analysis of Each Intervention against each Research Question

Nutrition Intervention
1. Access to (nutritious) food, food prices
2. BANC (Basic ante-natal care) – education and supplements, timing
3. Breastfeeding support*
4. Complementary feeding*
5. Deworming
6. ECD (food in ECD centres) (DSD)
7. Food access (e.g. food parcels, soup kitchens)
8. Food fortification (Vitamin A, Iron and Iodine)*
9. Food security (output 2 of outcome 7)
10. Growth monitoring and promotion including the use of MUAC
11. Household food production and preservation (home gardening)
12. IMCI (integrated management of childhood illnesses)
13. Improving hygiene practice (including in relation to water and sanitation)
14. Management of severe malnutrition*
15. Micronutrient including Vitamin A supplementation*
16. Nutrition education and counselling (part of all of these)
17. ORS and Zinc*
18. Targeted Meal Supplementation /Management of moderate malnutrition *

* High impact interventions

1. Access to (nutritious) food, food prices

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

Evaluation Question	Access to (nutritious) food, food prices
1. 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? Are there policy gaps? *Are food and nutrition policies sensitive to needs of children Under 5?* *Are food and nutrition policies funded?*	There is a lack of clarity as to whether the intended benefit from zero-rating really reaches poorest households, for alleviating poverty, and therefore is an effective policy tool[3]. This is because rich households benefit from the zero-rating as much as poor households. To reduce growing obesity and non-communicable diseases, the DOH has proposed[4] taxing undesirable processed foods and, at the same time, exempting healthier choices from taxation. This is to reduce risk factors for non-communicable diseases by encouraging a greater consumption of affordable nutrient-rich, fibre-rich foods and green leafy vegetables.

[3] Jansen, A, E Stoltz and D Yu. *Improving the targeting of zero-rated basic foodstuffs under value added tax (VAT) in South Africa – An exploratory analysis.* Stellenbosch Economic Working Papers: 07/12. A Working Paper of the Department of Economics and the Bureau for Economic Research at the University of Stellenbosch. May 2012. https://www.google.co.za/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&ved=0CC4QFjAA&url=http%3A%2F%2Fwww.ekon.sun.ac.za%2Fwpapers%2F2012%2Fwp072012%2Fwp-07-2012.pdf&ei=IyRBUp60EsSRhQeXuoGYBQ&usg=AFQjCNEISqRKs8o0Fz5hYRqILxIkEqOgcw&sig2=QeDE5OvQJq9q54GW-N0uww&bvm=bv.52434380,d.ZG4

[4] *SA to tackle chronic lifestyle diseases*. Health24.com. September 3, 2012. http://www.health24.com/Diet-and-nutrition/News/Junk-food-adverts-aimed-at-kids-to-be-banned-20130903

Evaluation Question	Access to (nutritious) food, food prices
2. 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?	Not applicable to zero-vat rated. Part of the DOH's plan[4] is to reduce the advertising of junk food to children during child-related TV time, while another part is to not only tax "undesirable processed foods" but to also exempt healthier foods from taxation. The aim is to eventually reduce one of the risk factors for non-communicable diseases by encouraging and enabling people to eat more nutritious foods. In addition to taxing unhealthy food, the DOH might consider legislation that limits or bans the display of unhealthy food at key points in a shop (i.e. the end of the aisle, near or at the register, etc.) that promote impulse purchasing[5].
3. 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?	Zero Vat rating isn't specifically targeted to households with young children. This is a universal tax policy for the country. The DOH's new strategy for preventing non-communicable diseases recognizes the importance of nutrition in children to prevent long-term health problems.
4. Are **high impact interventions** being prioritised in practice? *Are high impact interventions budgeted for in provincial Annual Performance Plans (APPs) and district health plans?*	This is not a high impact intervention.
5. What interventions are being **implemented effectively**, what aren't?	Research[3] suggests that poor households consume some items in the list more readily than others (e.g. basic vegetables vs. other vegetables such as broccoli), but that the zero-VAT tax policy isn't specifically targeting individual vegetables) The DOH's new strategy also recognizes that healthy foods are too expensive for most South Africans, costing between 10 percent and 60 percent more than unhealthy foods, and therefore the need to tax unhealthy foods and exempt healthy foods from taxation.
6. **Why** are some interventions not being implemented effectively and efficiently, and what is needed to strengthen, upscale, and sustain them? Sub-questions include:	Not applicable for zero-vat rated. The DOHs new proposed tax structure for healthy foods has not yet been implemented.
7. How far is nutrition **mainstreamed** into the work of relevant services which impact directly on children? .	Not applicable for zero-vat rated. The DOHs new proposed tax structure for healthy foods has not yet been implemented.
8. Are there appropriate **plans** to implement these nutrition interventions, are they included in departmental strategic plans, APPs and operational plans?	Not applicable for zero-vat rated. The DOHs new proposed tax structure for healthy foods has not yet been implemented.

[5] Cohen, B and S Baby. *Candy at the Cash Register — A Risk Factor for Obesity and Chronic Disease*. New England Journal of Medicine. 367 (15):1381. October 11, 2012. DOI: 10.1056/NEJMp1209443

Evaluation Question	Access to (nutritious) food, food prices
9. Is there appropriate **leadership** for nutrition at the respective levels and are they empowered to play that role?	DAFF is responsible for the leadership of zero-VAT rating of basic foodstuffs. But the quality of leadership is unclear. DOH appears to be responsible for the new proposed tax structure of health foods (although this hasn't yet been defined), and this may pose some duplication in the roles and responsibilities for Food pricing.
10. Are there **relevant workers** (not necessarily professional dieticians or nutritionists) to address nutrition-related interventions?	Not applicable.
11. 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?	Not applicable for delivery level. At policy level, it Is unclear if the relevant staff responsible for implementing this intervention have the requisite skills, as no data collection occurred with them.
12. Do the PHC and other service facilities have the necessary equipment, guidelines, protocols, and supplies to deal with nutrition in under-five children?	Not applicable
13. Do service standards/norms exist for relevant interventions?	The standards and norms for implementing this reside with the Department of the Treasury and the South African Revenue Service.
14. Are resources allocated appropriately and sufficiently (this would draw on international evidence of cost-benefits)?	As indicated above, the policy benefits rich and poor households alike.
15. 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 (e.g. community-based services such as nutrition advisors, and platforms for community involvement)? How extensive are these? *How are children accessed at community level? Are the newly deployed community health workers (under PHC re-engineering) engaged in nutrition services delivery?*	The standards and norms for implementing this reside with the Department of the Treasury and the South African Revenue Service.
16. 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?	Not applicable.
17. What **monitoring and evaluation systems** are in place and needed to monitor and improve the evidence base for and implementation of nutrition-related interventions?	Some evaluations have been conducted on the effects of zero VAT rating and the effect of food prices on non-communicable diseases. However, no routine monitoring appears to be in place for this intervention.

2. BANC (Basic Ante-Natal Care) – Education and Supplements, Timing

Basic Ante-Natal Care refers to the regular medical and nursing care recommended for women during pregnancy. BANC is a type of preventative care that benefits both mother and child. Essential interventions in BANC include identifying and managing obstetric complications and infections (including sexually transmitted infections and HIV). BANC is also an opportunity to promote healthy behaviours, such as breastfeeding, to give medical information around biological changes, and to give nutritional counselling 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 for every pregnant women starting in the first trimester of pregnancy. The availability of routine ANC plays a part in reducing maternal death rates, miscarriages, birth defects, low birth weight, and other preventable health problems.

Evaluation Question	BANC (Basic ante-natal care) – education and supplements, timing
1. 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? Are there policy gaps? *Are food and nutrition policies sensitive to needs of children Under 5?* *Are food and nutrition policies funded?*	The main policy governing BANC, is the Strategic Plan for Maternal, Newborn, Child and Women's Health (MNCWH) and Nutrition (2012) and the BANC and PMTCT guidelines. These guidelines are sensitive to the nutritional needs of pregnant women Funding for these is integrated into the DOH budget.
2. 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?	Not Applicable.
3. 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?	BANC is widely utilized by mothers, as there is more than 90% uptake of the intervention among pregnant women. But there are some social and cultural beliefs that can prevent women from coming earlier in their pregnancies, and these are not being addressed by the DOH. BANC is being prioritised.
4. Are **high impact interventions** being prioritised in practice? *Are high impact interventions budgeted for in provincial Annual Performance Plans (APPs) and district health plans?*	Not Applicable.

Evaluation Question	BANC (Basic ante-natal care) – education and supplements, timing
5. What interventions are being **implemented effectively**, what aren't?	Implementation of BANC appears to be well implemented with more than 97% of pregnant women accessing services. However, fewer than 75% receive 4 BANC visits and only 27% have their first visit before 20 weeks[6]. Enabling factors for implementation: – BANC guidelines and its checklist – group education works – Champions for nutrition in BANC – Regular monitoring and feedback on key BANC performance indicators – Peer counselling programmes – Capacity-building/ training – Supervisory visits by managers – Outreach campaigns – Focussed health promotion programmes and messages Limiting Factors for implementation: – Shortage of human resources – Lack of transport to go to communities – Cultural beliefs such as fear of being bewitched leads some pregnant women to present late for ANC – Low knowledge levels among health workers implementing BANC, they need retraining – can still improve - nutrition is still on the outside and not yet fully integrated – No tool to collects nutrition services delivered in BANC – Lack of time for health workers to provide nutrition education.
6. **Why** are some interventions not being implemented effectively and efficiently, and what is needed to strengthen, upscale, and sustain them? Sub-questions include:	See answer to question 5
7. How far is nutrition **mainstreamed** into the work of relevant services which impact directly on children? .	BANC is mainstreamed into the day-to-day work of the nurse in health facilities.
8. Are there appropriate **plans** to implement these nutrition interventions, are they included in departmental strategic plans, APPs and operational plans?	BANC is integrated into the plans for services provided at facility level to children under 5. There is no separate APP or operational plan for BANC separate from those for the health department.
9. Is there appropriate **leadership** for nutrition at the respective levels and are they empowered to play that role?	BANC is integrated into the leadership structure governing all health and nutrition services. There are no separate leaders for BANC.

[6] Department of Health. *Every death counts. Saving the lives of mothers, babies, and children in South Africa.* No date. http://www.mrc.ac.za/researchreports/everydeathcounts.pdf

Evaluation Question	BANC (Basic ante-natal care) – education and supplements, timing
10. Are there **relevant workers** (not necessarily professional dieticians or nutritionists) to address nutrition-related interventions?	See limiting factors listed in Answer to Question 5. Given staff shortages, there is also a risk that untrained staff / volunteers are given responsibility for some nutrition-related activities in BANC to reduce nurses' workloads, and the quality of these activities may be compromised.
11. 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?	Quality of service delivery is compromised by limited BANC training among midwives, and their poor ability to manage certain conditions in pregnancy like hypertension, HIV and the inability to detect twin pregnancy early[7]. In addition, poor or incomplete recording of BANC data has been noted[7]
12. Do the PHC and other service facilities have the necessary equipment, guidelines, protocols, and supplies to deal with nutrition in under-five children?	It appears Yes. BANC checklists – no data available Adult weighing scales – 91% of health facilities have them Micro-nutrients: Fewer than 45% of health facilities have the combined Folate-Iron tablets, but approximately 90% have the individual tablets.
13. Do service standards/norms exist for relevant interventions?	Yes, the Strategic Plan for Maternal, Newborn, Child and Women's Health (MNCWH) and Nutrition (2012). Also respondents mentioned the BANC guidelines (has a checklist of what to be done during pregnancy including MUAC to check for malnutrition and the micro-nutrient supplementation) and the BFHI guidelines.
14. Are resources allocated appropriately and sufficiently (this would draw on international evidence of cost-benefits)?	Staffing and supplies are an issue per the responses in answers to Questions 5 and 12.
15. 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 (e.g. community-based services such as nutrition advisors, and platforms for community involvement)? How extensive are these? *How are children accessed at community level? Are the newly deployed community health workers (under PHC re-engineering) engaged in nutrition services delivery?*	The main delivery channel for BANC is PHC services in health facilities. Despite the existence of appropriate systems and structures (e.g. CHWs, HCBCs, NGOs, etc.) but these are not effectively used to extend the reach of BANC into the community. We weren't able to determine the extent to which the newly deployed CHWs were engaged in BANC, as all data on government services was collected in health facilities and management levels.
16. 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?	Within DOH services, BANC is part and parcel of BANC, maternity, post-natal, and child health services. PHC re-engineering is expected to support and expand delivery of BANC care at household level, but this is not yet fully implemented.

[7] Dyeli, N. *An Investigation into the Implementation of the Basic Antenatal Care Programme by Midwives in Mdantsane Clinics*. Thesis submitted in partial fulfilment of the requirements for the degree Magister Curationis in the Department of Nursing Sciences at the University of Fort Hare. November 2011. http://ufh.netd.ac.za/bitstream/10353/425/1/Dyelithesis.pdf

Evaluation Question	BANC (Basic ante-natal care) – education and supplements, timing
17. What **monitoring and evaluation systems** are in place and needed to monitor and improve the evidence base for and implementation of nutrition-related interventions?	There are several indicators in the DHIS that build on BANC data: "*Antenatal 1st visit before 20 weeks"* *"Antenatal 1st visit 20 weeks or later"* *"Antenatal 1st visit total*" However, NDOH receives no M&E data on supplementation to pregnant women; therefore, there is no data to determine if the nutrition aspects of the intervention are effective There is no tool to collects nutrition services delivered in BANC

3. Breastfeeding Promotion

In South Africa, breastfeeding promotion 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.

<table>
<tr><th>Evaluation Question</th><th>Breastfeeding Promotion</th></tr>
<tr><td>1. 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? Are there policy gaps?

Are food and nutrition policies sensitive to needs of children Under 5?

Are food and nutrition policies funded?</td><td>There are a wide range of legislation, policies, strategies, and guidelines that speak to the importance of breastfeeding for child health.
<table>
<tr><th>Year</th><th>Dept</th><th>Legislation, Policies, Strategy, Guidelines</th></tr>
<tr><td colspan="3">Legislation</td></tr>
<tr><td>2012</td><td>DOH</td><td>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).</td></tr>
<tr><td>2010</td><td>DOH</td><td>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).</td></tr>
<tr><td colspan="3">Policies</td></tr>
<tr><td>2013</td><td>DOH</td><td>Infant and Young Child Feeding Policy (replaces 2007/8 policy)</td></tr>
<tr><td>2011</td><td>DOH</td><td>The Tshwane Declaration of Support for Breastfeeding</td></tr>
<tr><td>2010</td><td>DOH</td><td>The National Integrated Nutrition Programme – Policy Summary and Guide</td></tr>
<tr><td colspan="3">Strategies</td></tr>
<tr><td>2013</td><td>DOH</td><td>Negotiated Service Delivery Agreement</td></tr>
<tr><td>2013</td><td>DOH</td><td>Roadmap for Nutrition in South Africa 2013-2017</td></tr>
<tr><td>2012</td><td>DOH</td><td>Strategic plan for maternal, newborn, child and women's health and nutrition in South Africa 2012-2016</td></tr>
<tr><td>2012</td><td>DOH</td><td>South Africa's National Strategic Plan for a Campaign on Accelerated Reduction of Maternal and Child Mortality in Africa (CARMMA)</td></tr>
<tr><td colspan="3">Guidelines</td></tr>
<tr><td>2013</td><td>DOH</td><td>A Conceptual Framework on Human Milk Banks in South Africa</td></tr>
<tr><td>2012</td><td>DOH</td><td>In-patient treatment of severely malnourished children (10 steps to management of severe acute malnutrition)</td></tr>
<tr><td>2012</td><td>DOH</td><td>Breastfeeding Q&A Guide</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Evaluation Question</th><th>Breastfeeding Promotion</th></tr>
<tr><td></td><td>
<table>
<tr><td>2012</td><td>DOH</td><td>Supplementary feeding Programme</td></tr>
<tr><td>2010</td><td>DOH</td><td>Clinical Guidelines: Prevention of Mother-to-Child Transmission (includes Guidelines on HIV and Infant Feeding) Revised March 2013</td></tr>
<tr><td>2007</td><td>DOH</td><td>Guidelines for Maternity Care in SA</td></tr>
<tr><td>2005</td><td>DOH</td><td>Integrated Management of Childhood Illnesses (IMCI) Handbook (revised 2011)</td></tr>
<tr><td>No date</td><td>DOH</td><td>Mother Baby Friendly Initiative</td></tr>
<tr><td>No date</td><td>KZN DOH</td><td>Guidelines for the establishment and operation of Human Milk Banks in KZN</td></tr>
</table>
</td></tr>
<tr><td>2. 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?</td><td>The new regulations described in “legislation” above are</td></tr>
<tr><td>3. 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?</td><td>Breastfeeding counseling at the post-natal stage and support for breastfeeding at workplaces are the elements of the intervention that most affects household decisions. Unfortunately, breastfeeding counseling (especially for mothers with breastfeeding problems) is not being carried out sufficiently to support good breastfeeding practices. Workplace opportunities for breastfeeding are not yet in place, so they have no influence (yet) on household behaviours. The other elements (MBFHI, enforcement of the International Code) are implemented sufficiently, but are also not positively influencing household decisions and behaviours given the very low exclusive breastfeeding rate.</td></tr>
<tr><td>4. Are high impact interventions being prioritised in practice?
Are high impact interventions budgeted for in provincial Annual Performance Plans (APPs) and district health plans?</td><td>Aside from MBFHI and support for the International Code, the other elements of Breastfeeding Promotion are not being prioritised in practice. See response to question 6 below</td></tr>
<tr><td>5. What interventions are being implemented effectively, what aren’t?</td><td>Breastfeeding Promotion is implemented only partly effectively.
Enabling Factors:
• Education during ANC and during well-baby clinics
• Counselling during consultation
Barriers to Implementation:
• Staff need to be better trained and better supported and supervised to deliver all the Breastfeeding messages and support
• Insufficient time and heavy workloads of health workers
• Education messages are not structured or standardized.
• Targeting the message only to mothers.
• Poor community-based education around</td></tr>
</table>

Evaluation Question	Breastfeeding Promotion
	Breastfeeding Promotion • Social influences from peers and family discourage optimal feeding practices, and some believe that formula is better
6. **Why** are some interventions not being implemented effectively and efficiently, and what is needed to strengthen, upscale, and sustain them? Sub-questions include:	See answers to Question 5
7. How far is nutrition **mainstreamed** into the work of relevant services which impact directly on children? .	Post-natal breastfeeding counseling at health facility level is mainstreamed into the day-to-day work of the nurse in health facilities. It is part of the package of PHC interventions given to new mothers and children, but due to numerous factors, it is not being implemented as fully as it should be, due to high workloads with nurses, and lack of auxiliary health personnel or linkages with breastfeeding support groups to assist in implementation.
8. Are there appropriate **plans** to implement these nutrition interventions, are they included in departmental strategic plans, APPs and operational plans?	Breastfeeding Promotion is integrated into the plans for services provided at facility level to children under 5. There is no separate APP or operational plan for Breastfeeding Promotion separate from those for the health department.
9. Is there appropriate **leadership** for nutrition at the respective levels and are they empowered to play that role?	The Minister of Health has clearly stated the importance of breastfeeding for all maternal and child health. Otherwise, Breastfeeding Promotion is integrated into the leadership structure governing all health and nutrition services. There are no separate leaders for Breastfeeding Promotion at the national, provincial, or local levels.
10. Are there **relevant workers** (not necessarily professional dieticians or nutritionists) to address nutrition-related interventions?	General staff shortages and high workloads at health facility level were mentioned as reasons for not doing more around Breastfeeding Promotion, particularly for mothers experiencing breastfeeding problems. Many facilities noted the need for additional nutrition counsellors or nutrition advisors to assist with the range of nutrition activities at clinic level, including Breastfeeding education.
11. 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?	All nurses understand the importance of breastfeeding for overall child health and nutrition. But this masks knowledge gaps in skills, particularly in counseling mothers who have difficulties with breastfeeding. Knowledge levels could be improved, especially around the importance of continued breastfeeding until 12 months and breastfeeding during illness. 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.
12. Do the PHC and other service facilities have the necessary equipment, guidelines, protocols, and supplies to deal with nutrition in under-five children?	Little equipment is required for Breastfeeding Promotion education, although better IEC materials would assist in standardizing the range and depth of messages. Only 67% of health facilities could produce a copy of the IYCF guidelines or practical guide, and this could inhibit implementation where they are not available. However 81% of health facilities could produce a copy of the Guidelines for HIV and Safe infant feeding guidelines. In addition to the IYCF guidelines, several respondents mentioned the “Practical guide for optimal infant and young child feeding” as another set of norms to carry out the intervention.

Evaluation Question	Breastfeeding Promotion
13. Do service standards/norms exist for relevant interventions?	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
14. Are resources allocated appropriately and sufficiently (this would draw on international evidence of cost-benefits)?	There is no budget allocated to Breastfeeding Promotion, and no staff are specifically designated to do Breastfeeding Promotion, other than the PHC health workers. As mentioned previously, staff shortages inhibit adequate time spent for this task.
15. 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 (e.g. community-based services such as nutrition advisors, and platforms for community involvement)? How extensive are these? *How are children accessed at community level? Are the newly deployed community health workers (under PHC re-engineering) engaged in nutrition services delivery?*	Delivery of Breastfeeding Promotion is mainly through health education in health facilities by various health workers. While there is some community-level education carried out through CHWs and CCGs, and through nutrition-related campaigns, this is limited.
16. 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?	Within DOH services, Breastfeeding Promotion is part and parcel of maternity, post-natal, and child health services. PHC re-engineering is expected to support and expand delivery of Breastfeeding Promotion care at household level, but this is not yet fully implemented.
17. What **monitoring and evaluation systems** are in place and needed to monitor and improve the evidence base for and implementation of nutrition-related interventions?	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.

4. Complementary feeding

The transition from exclusive breastfeeding to family foods, referred to as complementary feeding, typically covers the period from 6 to 18-24 months of age, and is a very vulnerable period. It is the time when malnutrition starts in many infants, contributing significantly to the high prevalence of malnutrition in children under five years of age world-wide.

WHO recommends that complementary feeding should be *timely*, meaning that all infants should start receiving foods in addition to breast milk from 6 months onwards. It should be *adequate*, meaning that the complementary foods should be given in amounts, frequency, and consistency and using a variety of foods to cover the nutritional needs of the growing child while maintaining breastfeeding. Foods should be prepared and given in a *safe* manner, meaning that measures are taken to minimize the risk of contamination with pathogens. And they should be given in a way that is *appropriate*, meaning that foods are of appropriate texture for the age of the child and applying responsive feeding following the principles of psycho-social care. The adequacy of complementary feeding depends both on the availability of a variety of foods in the household, and on the feeding practices of caregivers. Feeding young infants requires active care and stimulation, where the caregiver is responsive to the child clues for hunger and also encourages the child to eat. This is also referred to as active or responsive feeding.

Evaluation Question	Complementary feeding
1. 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? Are there policy gaps? *Are food and nutrition policies sensitive to needs of children Under 5?* *Are food and nutrition policies funded?*	Yes, the Infant and Young Child Feeding Strategy (newly revised in 2013) is the main document that guides the implementation of this intervention. The strategy covers the main principles for complementary feeding established by UNICEF and WHO, with the exception of "Feeding during and after illness". This is a gap in the policy that needs to be addressed.
2. 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?	Yes, the IYCF, along with numerous other documents (See Breastfeeding Promotion) addresses the Code of Marketing of Breast milk Substitutes / Regulations relating to Foodstuffs for Infants and Young Children.
3. 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?	Given the widespread practice of introducing solid foods before 6 months, this intervention (along with the Breastfeeding interventions) appear to be failing in achieving the desired feeding behaviours. A few respondents claimed that this was a weakly implemented intervention that is overshadowed by the breastfeeding message. Even the messages about continued breastfeeding are not being fully emphasized, as several respondents say that mothers often stop breastfeeding completely at 6 months.
4. Are **high impact interventions** being prioritised in practice? *Are high impact interventions budgeted for in provincial Annual Performance Plans (APPs) and district health plans?*	This is a high impact intervention, but it is not being prioritised in delivery or in planning. There is no separate budget for complementary feeding as it is integrated into the DOH's PHC services.
5. What interventions are being **implemented**	Respondents noted numerous factors that enable or

Evaluation Question	Complementary feeding
effectively, what aren't?	impede implementation. Enabling Factors: • Education during ANC and during well-baby clinics • Counselling during consultation • Support for vegetable gardens (seeds from the clinic) Barriers to Implementation: • Staff need to be better trained and better supported and supervised to deliver all the complementary feeding messages • Insufficient time and heavy workloads of health workers • Education messages are not structured or standardized. • Insufficient demonstrations of how to make complementary foods; little follow-on support to empower mother to apply complementary feeding guidelines. • Targeting the message only to mothers. "This is wrong. We need to teach everyone" • Poor community-based education around complementary feeding • Social influences from peers and family discourage optimal feeding practices, and some believe that processed foods are better than home-prepared pureed food. "Mothers like Purity and Nestum" • Economic constraints result in diluted feeds and foods to make them stretch further. Some women are not getting social grants so that they can buy nutritious food. • Vegetable gardens are not popular or successful, so access to fresh vegetables is limited; the diet is imbalanced and contains more starch than vegetables • Mothers with children under 2 years don't bring children to the clinic regularly
6. **Why** are some interventions not being implemented effectively and efficiently, and what is needed to strengthen, upscale, and sustain them? Sub-questions include:	See answers to Question 5.
7. How far is nutrition **mainstreamed** into the work of relevant services which impact directly on children? .	Complementary Feeding is mainstreamed into the day-to-day work of the nurse in health facilities. It is part of the package of PHC interventions given to new mothers and children, but due to numerous factors, it is not being implemented as fully as it should be.
8. Are there appropriate **plans** to implement these nutrition interventions, are they included in departmental strategic plans, APPs and operational plans?	Complementary Feeding is integrated into the plans for services provided at facility level to children under 5. There is no separate APP or operational plan for Complementary Feeding separate from those for the health department.
9. Is there appropriate **leadership** for nutrition at the respective levels and are they empowered to play that role?	Complementary Feeding is integrated into the leadership structure governing all health and nutrition services. There are no separate leaders for Complementary Feeding.
10. Are there **relevant workers** (not	General staff shortages and high workloads at health

Evaluation Question	Complementary feeding
necessarily professional dieticians or nutritionists) to address nutrition-related interventions?	facility level were mentioned as reasons for not doing more education and support around complementary feeding, particularly for demonstrating how to make complementary foods and supporting mothers in their communities. Many facilities noted the need for additional nutrition counsellors or nutrition advisors to assist with the range of nutrition activities at clinic level, including complementary feeding education.
11. 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?	50% of all nurses understand the importance of counselling mothers on the importance of nutrient dense foods when a child is not growing. But this masks regional differences – 80% of nurses in KZN vs. 20-40% in other provinces. Knowledge levels could be improved, especially around the importance of continued breastfeeding until 12 months, and breastfeeding during illness.
12. Do the PHC and other service facilities have the necessary equipment, guidelines, protocols, and supplies to deal with nutrition in under-five children?	Little equipment is required for complementary feeding education, although IEC materials, and cooking equipment (for demonstrations on how to prepare complementary foods) would assist in standardizing the range and depth of messages. We did not look for any complementary food –related materials or equipment during this evaluation. Only 67% of health facilities could produce a copy of the IYCF guidelines or practical guide, and this could inhibit implementation where they are not available. However 81% of health facilities could produce a copy of the Guidelines for HIV and Safe infant feeding guidelines.
13. Do service standards/norms exist for relevant interventions?	In addition to the IYCF guidelines, several respondents mentioned the "Practical guide for optimal infant and young child feeding" as another set of norms to carry out the intervention.
14. Are resources allocated appropriately and sufficiently (this would draw on international evidence of cost-benefits)?	There is no budget allocated to complementary feeding, and no staff are specifically designated to do complementary feeding, other than the PHC health workers. As mentioned previously, staff shortages inhibit adequate time spent for this task. .
15. 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 (e.g. community-based services such as nutrition advisors, and platforms for community involvement)? How extensive are these? *How are children accessed at community level? Are the newly deployed community health workers (under PHC re-engineering) engaged in nutrition services delivery?*	Delivery of Complementary feeding is mainly through health education in health facilities by various health workers. While there is some community-level education carried out through CHWs and CCGs, and through nutrition-related campaigns, this is limited.
16. 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?	Within DOH services, complementary Feeding is part and parcel of maternity, post-natal, and child health services. PHC re-engineering is expected to support and expand delivery of Complementary Feeding care at household level, but this is not yet fully implemented.
17. What **monitoring and evaluation systems** are in place and needed to monitor and	There are no indicators in the DHIS that are routinely reported for Complementary Feeding. In addition, there

Evaluation Question	Complementary feeding
improve the evidence base for and implementation of nutrition-related interventions?	is a dearth of evaluations that can inform if the intervention is being delivered effectively and if there is good uptake of the messages by mothers.

5. Deworming

Soil-transmitted helminths – which include roundworms, whipworms and hookworms – are among the most common causes of infection in people living in the developing world. Soil-transmitted helminths impair nutritional status in multiple ways: feeding on host tissues which leads to a loss of iron and protein; decreased absorption of nutrients in the intestine, especially vitamin A; loss of appetite and therefore reduced nutrition intake and physical fitness; and increased diarrhoea and dysentery. Nutritional impairment caused by soil-transmitted helminths is recognized to have a significant impact on growth and physical development, and also to impair cognitive development, limit educational advancement, and hinder economic development.

In South Africa, deworming is recommended only as a prophylaxis for children under 5, and not as a routine health intervention.

Evaluation Question	Deworming*
1. 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? Are there policy gaps? *Are food and nutrition policies sensitive to needs of children Under 5?* *Are food and nutrition policies funded?*	There are no separate guidelines governing deworming however, various health department guidelines include the intervention as one of many key interventions to be delivered to children under 5 years of age on a regular basis. Some of these are listed below: – the Strategic Plan for Maternal, Newborn, Child and Women's Health (MNCWH) and Nutrition (2012-2016) – IMCI guidelines, – Standard Treatment Guidelines and Essential Medicines List for South Africa (PHC Level), 2008 {as a prophylaxis and not as a routine health intervention for children under 5]. – Guidelines for Community-Based Nutrition Interventions – Road to Health Booklets. These guidelines are sensitive to the needs of children U5. Funding for deworming is integrated into the DOH budget.
2. 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?	Not Applicable.

Evaluation Question	Deworming*
3. 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?	Routine deworming to children between the ages of 12 to 59 months, which is meant to be administered every 6 months, is currently being implemented in PHC facilities and through campaigns. However, mothers do not bring their children to health facilities unless their child is sick or needs to be immunized. Although deworming treatment is included in the Road to Health booklet, there is a general lack of understanding among mothers of the importance of the intervention as is the case with other routine health promoting interventions. As deworming lends itself to community outreach, it is expected that, with the PHC re-engineering, CHWs will be able to take this intervention directly to the community on a more regular basis thus increasing its coverage.
4. Are **high impact interventions** being prioritised in practice? *Are high impact interventions budgeted for in provincial Annual Performance Plans (APPs) and district health plans?*	Deworming for children 12-59 months of age is prioritized and is featured in several key strategies and guidelines addressing infant and child health. Costing for deworming is incorporated in the nutrition budgets of the different levels of the health system.
5. What interventions are being **implemented effectively**, what aren't?	While deworming in children under 5 has been integrated into the PHC services provided at health facilities, coverage for children between the ages of 1 and 5 is reportedly low as it is dependent on mothers bringing their children to the health facilities. A major inhibiting factor in the uptake of this intervention appears to be the fact that mothers do not bring young children to health facilities unless they are sick.
6. **Why** are some interventions not being implemented effectively and efficiently, and what is needed to strengthen, upscale, and sustain them? Sub-questions include:	See answer to question 5.
7. How far is nutrition **mainstreamed** into the work of relevant services which impact directly on children? .	Deworming is mainstreamed into the day-to-day work of the nurse in health facilities.
8. Are there appropriate **plans** to implement these nutrition interventions, are they included in departmental strategic plans, APPs and operational plans?	Deworming is integrated into the plans for services provided at facility level to children under 5. There is no separate APP or operational plan for deworming separate from those for the health department.
9. Is there appropriate **leadership** for nutrition at the respective levels and are they empowered to play that role?	Deworming is integrated into the leadership structure governing all health and nutrition services. There are no separate leaders for the intervention.
10. Are there **relevant workers** (not necessarily professional dieticians or nutritionists) to address nutrition-related interventions?	Currently, deworming is delivered through PHC facilities and through occasional campaigns. None of the facilities visited reported staff shortages as affecting the delivery of this intervention. With the establishment of the ward-based PHC outreach teams, a package of evidence-based community MNCWH services is expected to be delivered by generalist CHWs including mass deworming through community-based campaigns.
11. 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?	Health care workers at facility lever appear to have the necessary skills to administer regular deworming to children between 1 and 5 years of age. However, their deeper level of knowledge/understanding was not interrogated as questions regarding deworming were included as part of the Health Workers Knowledge Questionnaire.

Evaluation Question	Deworming*
12. Do the PHC and other service facilities have the necessary equipment, guidelines, protocols, and supplies to deal with nutrition in under-five children?	The adequacy of supplies for the delivery of deworming could not be established as no questions were included in the rapid assessment tool to check the availability of deworming tablets e.g. mebendazole/ albendazole
13. Do service standards/norms exist for relevant interventions?	Health facilities follow the deworming protocol specified in the various guidelines listed in the answer to Question 1 including: • Standard Treatment Guidelines and Essential Medicines List for South Africa (PHC Level), 2008 • IMCI Guidelines, etc. No provincial adaptations to the protocol were noted.
14. Are resources allocated appropriately and sufficiently (this would draw on international evidence of cost-benefits)?	Staffing and supplies were not reported as being major issues in the implementation of regular deworming. –
15. 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 (e.g. community-based services such as nutrition advisors, and platforms for community involvement)? How extensive are these? *How are children accessed at community level? Are the newly deployed community health workers (under PHC re-engineering) engaged in nutrition services delivery?*	At present, deworming is delivered through PHC facilities and through occasional campaigns. However, the PHC re-engineering currently underway is expected to extend the reach of this intervention into the communities through the provision of mass deworming campaigns by CHWs. However, we weren't able to determine the extent to which the newly deployed CHWs have started to be engaged in such activities, as all data on government services was collected in health facilities and management levels.
16. 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?	Within DOH services, regular deworming is part of child health services and is mainly delivered through PHC facilities and campaigns.
17. What **monitoring and evaluation systems** are in place and needed to monitor and improve the evidence base for and implementation of nutrition-related interventions?	There is one (1) direct indicator in the DHIS which captures the delivery of deworming: *"Deworming dose 12-59 months coverage (annualised)" - defined as the proportion of children 12-59 months who received deworming medication, preferably every six months.*

6. ECD (food in ECD centres) (DSD)

"Access to food" is fundamental to South Africa's social safety net, and 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.

Evaluation Question	ECD (food in ECD centres) (DSD)
1. 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? Are there policy gaps? *Are food and nutrition policies sensitive to needs of children Under 5?* *Are food and nutrition policies funded?*	Yes, relevant policies exist for ECD Centres[8], and these appear to be targeted to children under the age of 5. • Ministry for Social Development's White Paper on Social Welfare, 1997. • Child Care Act 1983, • new Children's Bill • National Integrated Plan for Children affected and infected by HIV and AIDS. • White Paper 5 on Early Childhood • Development • National Programme of Action for Children[9]
2. 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?	The Infant and young child feeding policy identifies best evidence-based practice actions that should be taken by national, provincial and district managers, health establishments and all health care personnel caring for parents and children during pregnancy, childbirth and in the first five years of life to protect, promote and support optimal safe feeding of infants and young children.[10]
3. 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?	Less than 10% of the country's pre-schoolers attend registered ECD centres that receive the nutritional support. There is a need to review and harmonise existing policies in order to ensure universal access to ECD services, making ECD compulsory so that children from rural areas and informal settlements have access to the right to education at an early stage of development.[11]
4. Are **high impact interventions** being prioritised in practice? *Are high impact interventions budgeted for in provincial Annual Performance Plans (APPs) and district health plans?*	Not applicable
5. What interventions are being **implemented**	The number of children accessing ECD services and

[8] http://www.education.gov.za/LinkClick.aspx?fileticket=xn%2fuA%2b%2bsWEM%3d&tabid=96&mid=399
http://www.capetown.gov.za/en/CityHealth/Documents/Legislation/Policy%20-%20Early%20Childhood%20Development%20Centres.pdf
http://www.info.gov.za/view/DownloadFileAction?id=70066

[9] Guidelines for Early Childhood Development Services, 2006.

[10] Infant and young child feeding policy, DOH, 2007.
http://www.info.gov.za/view/DownloadFileAction?id=94072

[11] DSD. Annual Report for the year ending 31 March 2012. 2012

Evaluation Question	ECD (food in ECD centres) (DSD)
effectively, what aren't?	programmes increased by 26.5% to 209 376. Out of 1000 target ECD programmes complying with norms and standards, 121 did not comply with the Norms and Standards hence the target could not be met.12
6. **Why** are some interventions not being implemented effectively and efficiently, and what is needed to strengthen, upscale, and sustain them? Sub-questions include:	While there is a commitment to the ECD programme within the DSD, the constraints faced in human and financial resources limits the effectiveness of its implementation
7. How far is nutrition **mainstreamed** into the work of relevant services which impact directly on children? .	Nutrition is a big focus of ECD centres, and financially they are obligated to feed the children who attend nutritious food (for R6-R7 per child per day)
8. Are there appropriate **plans** to implement these nutrition interventions, are they included in departmental strategic plans, APPs and operational plans?	Yes
9. Is there appropriate **leadership** for nutrition at the respective levels and are they empowered to play that role?	Yes, but there is a need for more human capacity at ECD centres, management and government levels
10. Are there **relevant workers** (not necessarily professional dieticians or nutritionists) to address nutrition-related interventions?	Yes, but there is a need for more human capacity at ECD centres as well as nutrition training.
11. 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?	Partly, there is a need for more nutrition training at ECD centres. Only 31% of respondents felt that there were enough of the right kind of people/skills to manage or implement food / nutrition, and in 36% of respondents stated that no staff had participated in food/nutrition related training in the last 2 years.
12. Do the PHC and other service facilities have the necessary equipment, guidelines, protocols, and supplies to deal with nutrition in under-five children?	
13. Do service standards/norms exist for relevant interventions?	Yes, the Guidelines for Early Childhood Development Services.
14. Are resources allocated appropriately and sufficiently (this would draw on international evidence of cost-benefits)?	There is a lack of human and financial resources across ECD centres.
15. 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 (e.g. community-based services such as nutrition advisors, and platforms for community involvement)? How extensive are these? *How are children accessed at community level? Are the newly deployed community health workers (under PHC re-engineering) engaged in nutrition services delivery?*	Yes. Social Workers assist with community and ECD centres.
16. What **institutional arrangements** are currently in place within and across departments and agencies (government, private sector, community actors) to address	The ECD programme is a collaborative program which involves active coordination among several departments e.g. DSD, DBE, DOH, etc. There is a national inter-departmental committee for ECD with terms of reference

[12] DSD APP 2011/12

Evaluation Question	ECD (food in ECD centres) (DSD)
child nutrition and what is needed to improve the effectiveness of nutrition interventions?	spelling out the coordination mechanism. [There is also a similar coordination structure at the provincial level.] The need for this coordination mechanism was initially called for in the White Paper for Social Welfare (1997). With regards to food/nutrition issues, the DSD works closely with the DOH "The DOH's role is to address the nutritional elements of ECDs" However, there is a need for better coordination between the DOH and the DSD On the ground, the clinics are expected to work closely with the ECD centres. DSD - implements the Norms and standards governing the programme, registers ECD centres, provides psychosocial support and general oversight. The DSD has a parenting program which has a nutritional component to it. DOE - Develops the curriculum and trains ECD practitioners DOH – Nutrition, IMCI and Immunization
17. What **monitoring and evaluation systems** are in place and needed to monitor and improve the evidence base for and implementation of nutrition-related interventions?	There are monitoring tools used to compile quarterly reports for ECD centres

7. Food access (e.g. food parcels, soup kitchens)

Provision of extra food to children or families beyond what they normally have at home is a common intervention used to support the nutritional wellbeing of the target population. Although evidence of the impact of supplementary feeding on child growth is inconclusive[13], "Access to food" is fundamental to South Africa's social safety net, and providing supplemental food through soup kitchens or food parcels for at-risk groups are key elements contributing to South Africa's Food Security Strategies.

DSD partners with Home and Community based Care organisations (HCBCs) to establish soup kitchens for vulnerable children, youth, and adults who are malnourished and/or affected by HIV, AIDS, or TB. Ideally, a soup kitchen provides a nutritious meal that consists of meat, vegetables and salads.

The South African Social Security Agency (SASSA) provides food parcels to people in distress for 3-6 months. These parcels are supposed to be comprised of basic staple foods that are high in nutritional content. Beneficiaries are identified through standardised eligibility criteria by DSD or other departments (e.g. DAFF and DOH staff), as well community leaders. Food parcels are then distributed monthly to the beneficiaries until alternate medium-term interventions are successfully introduced to render the beneficiaries self-sufficient, sustainable and not dependent on food relief.

<table>
<tr><th>Evaluation Question</th><th>Food access (e.g. food parcels, soup kitchens)</th></tr>
<tr><td>1. 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? Are there policy gaps?
Are food and nutrition policies sensitive to needs of children Under 5?
Are food and nutrition policies funded?</td><td>Various policies, strategies, guidelines were highlighted during fieldwork and during the review of literature as guiding the implementation of Food Access interventions:
<table>
<tr><td colspan="3">Legislation</td></tr>
<tr><td>2010</td><td>DSD</td><td>The Social Assistance Amendment Act (2010)</td></tr>
<tr><td>2008</td><td>DSD</td><td>The Social Assistance Amendment Act (2008)</td></tr>
<tr><td>2007</td><td>n/a</td><td>Children's Amendment Act</td></tr>
<tr><td>2006</td><td>n/a</td><td>Older Person's Act</td></tr>
<tr><td>2005</td><td>n/a</td><td>Children's Act</td></tr>
<tr><td>2004</td><td>DSD</td><td>The Social Assistance Act</td></tr>
<tr><td>1996</td><td>n/a</td><td>Section 27 of Chapter 2 (Bill of Rights of RSA Constitution of 1996:13)</td></tr>
<tr><td colspan="3">Policies</td></tr>
<tr><td>2013</td><td>DAFF / DSD</td><td>National Policy on Food and Nutrition (in process)</td></tr>
<tr><td>2012</td><td>DSD</td><td>Social Service Professions Policy (in process)</td></tr>
<tr><td colspan="3">Strategies</td></tr>
<tr><td>2002</td><td>DAFF</td><td>Integrated Food Security Strategy (IFSS)</td></tr>
<tr><td colspan="3">Guidelines</td></tr>
<tr><td>2010</td><td>DOH</td><td>Healthy eating for preschool children</td></tr>
<tr><td>2006</td><td>DSD</td><td>Guidelines for ECD services (including nutrition and menu guidelines)</td></tr>
<tr><td>No date</td><td>DSD/ SASSA</td><td>The Social Relief Guidelines</td></tr>
<tr><td colspan="3">Special Programmes</td></tr>
</table>
</td></tr>
</table>

[13] Sguassero Y, M de Onis, AM Bonotti, G Carroli. Community-based supplementary feeding for promoting the growth of children under five years of age in low and middle income countries (Review). The Cochrane Library. 2012, Issue 6. June 2012. http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD005039.pub3/abstract

Evaluation Question	Food access (e.g. food parcels, soup kitchens)
	2011 DSD Food for All Campaign No date DAFF Zero Hunger No date DSD Sustainable Livelihoods programme
2. 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?	Not applicable.
3. 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?	The DSD's basket of Food Access interventions are not designed to change nutrition or food-related behaviour; rather they aim to create changes in a person's wellbeing through the following outcomes: • Increase food intake • Decrease the number of individuals that are hungry due to the unavailability of adequate quantity of food Food Vouchers are also intended to empower beneficiaries to utilise their money in the best possible way to receive nutritious foods, without placing restrictions on what food should be purchased or eaten. The vouchers are intended to also teach beneficiaries about the value and use of money, while also ensuring that they do not go hungry.
4. Are **high impact interventions** being prioritised in practice? *Are high impact interventions budgeted for in provincial Annual Performance Plans (APPs) and district health plans?*	Not applicable.
5. What interventions are being **implemented effectively**, what aren't?	Disappointingly, no Food Access intervention has a priority focus on the adequacy of food provided or consumed – i.e. nutritional diversity, nutritional balance, and overall health quality of food items (i.e. free from pesticide residues) – that are either provided in parcels or meals, or that are purchased with grants and vouchers. Although separate legislation and standards regulate some of these concerns (such as pesticide residues), the fact is DSD's focus in Food Access and Sustainable Livelihoods is on making available a greater quantity of food and not quality of food. This is a shortcoming that urgently needs more attention.
6. **Why** are some interventions not being implemented effectively and efficiently, and what is needed to strengthen, upscale, and sustain them? Sub-questions include:	• There are vacancies and staff require training on food and nutrition needs and requirements of pregnant women and young children. • The monitoring of the delivery of all Food Access Interventions could be improved. These include tracking the length of time individuals and households are enrolled in the intervention, their change in nutritional status as a result of participation, and their relapse rate. • The data on Food Access interventions is not comprehensive or reliable. This data needs to be disaggregated to local level to assist planning and

Evaluation Question	Food access (e.g. food parcels, soup kitchens)
	targeting. • M&E systems are poor as they lack outcome level data that indicates the effects of these interventions. • Clearly indicate performance targets for delivery of Food Access interventions to pregnant women and children under 5 in Strategic Plans and APPs.
7. How far is nutrition **mainstreamed** into the work of relevant services which impact directly on children? .	Overall the impact sought for all the Food Access interventions is to reduce hunger and malnutrition in the vulnerable populations in South Africa.
8. Are there appropriate **plans** to implement these nutrition interventions, are they included in departmental strategic plans, APPs and operational plans?	Yes.
9. Is there appropriate **leadership** for nutrition at the respective levels and are they empowered to play that role?	There is a lack of human resources currently at DSD.
10. Are there **relevant workers** (not necessarily professional dieticians or nutritionists) to address nutrition-related interventions?	Not applicable.
11. 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?	Not applicable.
12. Do the PHC and other service facilities have the necessary equipment, guidelines, protocols, and supplies to deal with nutrition in under-five children?	Not applicable.
13. Do service standards/norms exist for relevant interventions?	• Children's Act 38 of 2005 • Western Cape Provincial Government Policy on the Funding of Non-Governmental Organisations for rendering Social Welfare Services • Early Childhood Development Protocol • DOH menu guidelines for ECD centres • Food template for Social Relief of Distress • Social Relief Guidelines • Woolworth Trust SOPs
14. Are resources allocated appropriately and sufficiently (this would draw on international evidence of cost-benefits)?	Respondents broadly cited human resources constraints as limiting implementation, particularly vacant positions and inadequate training of those currently delivering and monitoring Food Access interventions and ECD support.
15. 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 (e.g. community-based services such as nutrition advisors, and platforms for community involvement)? How extensive are these? *How are children accessed at community level? Are the newly deployed community health workers (under PHC re-engineering) engaged in nutrition services delivery?*	Yes. The DSD uses intermediaries such as ECD centres to reach young children, and Food Bank (along with NGOs/NPOs) to reach the rest of the community.
16. What **institutional arrangements** are currently in place within and across	DSD undertakes little strategic coordination with DOH or DAFF around nutrition at national level, but does work

Evaluation Question	Food access (e.g. food parcels, soup kitchens)
departments and agencies (government, private sector, community actors) to address child nutrition and what is needed to improve the effectiveness of nutrition interventions?	closely with SASSA in carrying out Food Access interventions. Although the three line departments (DOH, DSD, and DARD) along with countless NGOs actively promote specific food and nutrition interventions at household, facility and community levels, none of the DSD Food Access interventions are focused primarily on children or pregnant mothers.
17. What **monitoring and evaluation systems** are in place and needed to monitor and improve the evidence base for and implementation of nutrition-related interventions?	No M&E data appears to be disaggregated to better track the number of children under 5, and pregnant or lactating mothers who have been reached with Food Access interventions. Moreover, the quality of existing data is uncertain; for example, there are lists of people who visit Soup Kitchens, but respondents reported that many more people visit these kitchens than are on the list.

8. Food Fortification

Food fortification is the process of adding micronutrients (essential trace elements and vitamins) to staple foods and/or condiments to prevent large-scale deficiency diseases. 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 recognized dietary deficiency(ies). Adding fortification to everyday staple products means those who are most deprived of essential vitamins and minerals can obtain significant levels of them through a diet they can afford. Not only do people become healthier but they also live longer, leading 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.

The main methods of food fortification are: commercial and industrial fortification (i.e. adding nutrients to common cooking foods such as flour, rice, oils, salt); and bio-fortification (i.e. breeding crops to increase their nutritional value, including both conventional selective breeding and modern genetic modification).

In South Africa, mandatory legislation for the fortification of wheat flour and maize meal has been in place since 2003.

Evaluation Question	Nutrition Education and Counseling
1. 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? Are there policy gaps? *Are food and nutrition policies sensitive to needs of children Under 5?* *Are food and nutrition policies funded?*	Yes. On 7 October 2003, legislation came into effect requiring any person who manufactures, imports, or sells bread wheat flour and maize meal to fortify them. The fortification regulations are contained within the Foodstuffs, Cosmetics, and Disinfectants Act (Act No. 54) of 1972 and specified that the following should be added to Maize Meal and Wheat Flour: *Vitamins:* • *Vitamin A* • *Thiamine (Vitamin B1)* • *Riboflavin (Vitamin B2)* • *Niacin* • *Folic Acid* • *Pyridoxine (Vitamin B6)* *Minerals:* • *Iron* • *Zinc*
2. 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?	Not applicable to food fortification.
3. 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?	Food fortification is targeted at the national population and, because maize meal and bead are staple foods in South Africa, food fortification ends up reaching children under 5.

Evaluation Question	Nutrition Education and Counseling
4. Are **high impact interventions** being prioritised in practice? *Are high impact interventions budgeted for in provincial Annual Performance Plans (APPs) and district health plans?*	Yes. Food fortification is prioritised as is evidenced by the presence of legislation mandating it.
5. What interventions are being **implemented effectively**, what aren't?	While there appears to be compliance to mandatory food fortification by large millers and bakers who account for approximately 70% of bread from wheat flour and maize meal, getting small millers to fortify continues to be a challenge.
6. **Why** are some interventions not being implemented effectively and efficiently, and what is needed to strengthen, upscale, and sustain them? Sub-questions include:	The effective implementation of food fortification is hampered by several factors including: • Overburdened Environmental Health Practitioners whose responsibility it is to conduct on-site visits of mills and bakeries, ascertain the presence of functioning equipment, observe the fortification process and take samples of fortified product for analysis. • Limited lab capacity to analyse samples in a timely manner • Non-compliance by many small millers – particularly seasonal millers and those who operate in rural areas
7. How far is nutrition **mainstreamed** into the work of relevant services which impact directly on children? .	Some aspects of food fortification are mainstreamed while others are not. Perhaps because food fortification is governed by national legislation, there appears to be a fair amount of compliance among large millers and bakers who have made the investment to purchase and set up the necessary fortification equipment and establish fortification as part of their normal milling and baking processes. In addition, institutions offering certification for new Environmental Health Practitioners (EHPs), the main health cadre responsible for monitoring the implementation of food fortification, have incorporated fortification training modules as part of the national curriculum of EHPs. However, the effective monitoring of compliance, is not as mainstreamed as it needs to be. This appears to be due to a combination of the numerous tasks and responsibilities EHPs are charged with, coupled with the sometimes over-riding priorities of the municipalities they fall under. Furthermore, difficulty in finding and monitoring small millers – particularly seasonal millers and those that do not "want to be found" has introduced a gap whereby up to 30% of the wheat flour and maize meal available for consumption (particularly in rural areas) is still not fortified.
8. Are there appropriate **plans** to implement these nutrition interventions, are they included in departmental strategic plans, APPs and operational plans?	Food fortification is a nationally mandated intervention. However, the monitoring of compliance is covered under the Environmental Health Services budgets of district/municipal level departments of health.

Evaluation Question	Nutrition Education and Counseling
9. Is there appropriate **leadership** for nutrition at the respective levels and are they empowered to play that role?	The lead department responsible for the implementation of food fortification is the Department of Health through the National Fortification Alliance. Other key stakeholders include: • The Department of Trade and Industry (which provides support to small and emerging millers for the purchase of fortification equipment) • The Global Alliance for International Nutrition (GAIN) who, in partnership with UNICEF, provided financial and technical support for the national food fortification effort from 2004 to 2008 • UNICEF • The National Chamber of Milling • The National Association of Maize Millers • The South African Chamber of Banking National Consumers Union
10. Are there **relevant workers** (not necessarily professional dieticians or nutritionists) to address nutrition-related interventions?	Yes. Food fortification of wheat flour and maize meal is implemented by millers and bakers and is incorporated into their normal production processes. Compliance monitoring is the responsibility of the DOH via its EHPs.
11. 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?	EHPs receive training on food fortification and their professional role and responsibility during their certification process.
12. Do the PHC and other service facilities have the necessary equipment, guidelines, protocols, and supplies to deal with nutrition in under-five children?	Not applicable to food fortification.
13. Do service standards/norms exist for relevant interventions?	The standards/norms for the fortification of wheat flour and maize meal is part of the legislation which governs the intervention.
14. Are resources allocated appropriately and sufficiently (this would draw on international evidence of cost-benefits)?	As food fortification is governed by legislation and is thus mandatory, millers and bakers are required to comply. However, for the small millers for whom the cost of the fortification equipment is a significant barrier to compliance, the DTI provides support towards the purchase of the equipment.
15. 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 (e.g. community-based services such as nutrition advisors, and platforms for community involvement)? How extensive are these? *How are children accessed at community level? Are the newly deployed community health workers (under PHC re-engineering) engaged in nutrition services delivery?*	Not applicable to food fortification.
16. 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?	The South African Alliance Against Malnutrition provides a coordinating mechanism for all relevant stakeholders to work together in improving the implementation of food fortification.

Evaluation Question	Nutrition Education and Counseling
17. What **monitoring and evaluation systems** are in place and needed to monitor and improve the evidence base for and implementation of nutrition-related interventions?	Monitoring of compliance of food fortification s carried out by EHPs as part of their regular duties. However, EHPs need to receive the necessary support from their municipal/district health departments in order to prioritise this activity. There is also a need for labs to generate timely analysis so decision makers have access to accurate/ usable results

9. Food Security (output 2 of outcome 7)

The SA 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 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).

Evaluation Question	Food security (output 2 of outcome 7)
1. 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? Are there policy gaps? *Are food and nutrition policies sensitive to needs of children Under 5?* *Are food and nutrition policies funded?*	Output 2 of Outcome 7 has specific Key targets for 2014[14]: – The % of the total population that experiences hunger from 52% to 30% using national food consumption survey data%. – The rate of under-nutrition of children falls from 9.3% to 5%. – The CPIX for poor people (which is heavily dependent on the price of food) does not rise more than the average level of inflation. – Establishing 67 929 community, institutional and school gardens to enable at least 30% of poor households to produce some of their food and improve income. DAFF's integrated food security strategy (IFSS) of 2002 guides and informs Food Security interventions. The vision of IFSS is to attain universal physical, social and economic access to sufficient, safe and nutritious food by all South Africans at all times, but there is limited mention of specific support measures for food security. The strategy is not specifically sensitive to the nutrition needs of pregnant women or children under 5, as it is mainly focused on small holder farmers (less so now on subsistence farmers). Budgets for food security have been declining Although South Africa's food security programme has a Zero Hunger focus that was inspired by Brazil's *Fome Zero* programme, South Africa has a narrower focus on small scale-farmer assistance with little clarity on how, if at all, household food security of non-agricultural households is to be addressed[15].
2. 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?	Not applicable.
3. To what extent are nutrition interventions from different agencies (government and non-government) influencing household	Inter-department linkages between the food security programme and other nutrition interventions are weak at national, provincial, and district levels. In KZN, however,

[14] Government of South Africa. *Output 7. Measurable Performance and Accountable Delivery. Outputs and Measures*. http://www.info.gov.za/view/DownloadFileAction?id=134061

[15] *Whatever happened to the Zero Hunger programme?* Food Ramblings blog. 2012. http://foodramblings.tumblr.com/post/29883344460/what-ever-happened-to-the-zero-hunger-programme

Evaluation Question	Food security (output 2 of outcome 7)
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?	there are established linkages at local (i.e. ward) level through the OSS war rooms, but DOA staff do not regularly attend these meetings, thereby weakening the ability to effectively identify vulnerable households and ensure a comprehensive approach to assisting them. There is some overlap between the DSD Sustainable Livelihoods programme and the DAFF's Food Security programme
4. Are **high impact interventions** being prioritised in practice? *Are high impact interventions budgeted for in provincial Annual Performance Plans (APPs) and district health plans?*	Not applicable. This is not a high impact intervention But, it appears that Food Security is generally not being prioritised by DAFF, as its mission statement has Food Security last in the list of DAFF activities: "Our vision will be achieved through developing and sustaining a sector that contributes to, and embraces: • Economic growth (and development) • Job creation • Rural development • Sustainable use of natural resources • Food security"[16] Respondents also reported that food security for subsistence farmers is being de-emphasised in DAFF and the focus is on building the capacity of smallholder farmers to expand their production for marketing.
5. What interventions are being **implemented effectively**, what aren't?	Enablers for Implementation: • Sufficient materials (production inputs; tractors, seeds, fertilizers and chemicals, and agricultural infrastructure) • Sufficient staff Support for farmers (communal fields and commercial farms) • Linkage with DSD for profiling communities • Engaging outside mentors to stop corruption, support planning and implementation; this increased production from 3 to 8 tonnes per hectare • Declaring the district an "agricultural" district • Support from the local municipal mayor, and the community • Community commitment and cooperation Barriers to Implementation: • Government procurement process not aligned to the planting season leads to delays in implementation; also political interference in appointments of service providers. • Frequent changes in food security leadership and strategies at provincial level • Staff vacancies in food security • Poor technical skills of Food Security officers and project management Food security Managers. • Continuous changes in programme focus and scope takes time for staff and the general public to understand • Lack of community commitment • Short-term planning; need long-term planning instead • Insufficient budget • Government goes beyond its mandate by wanting to do everything • Land ownership by traditional authority

[16] DAFF Annual Report 2011/2012. http://www.nda.agric.za/docs/AnnualReports/2011_12/AR2012.pdf

Evaluation Question	Food security (output 2 of outcome 7)
	• Financial illiteracy in the communities • Poor Monitoring after the initial intervention
6. **Why** are some interventions not being implemented effectively and efficiently, and what is needed to strengthen, upscale, and sustain them? Sub-questions include:	To strengthen and scale-up food security for the purpose of improving nutrition in South Africa, there is a need to shift the focus to "nutrition-led" agriculture that incorporates nutrition objectives for agricultural activities and targets pregnant women and households with young children (under 5) for all household food production activities. Staffing shortages need to be addressed, and food security staff need training in nutrition.
7. How far is nutrition **mainstreamed** into the work of relevant services which impact directly on children? .	There is no integration or mainstreaming of Food security into other child-focused services, despite the key targets indicated in the Answer to Question 1.
8. Are there appropriate **plans** to implement these nutrition interventions, are they included in departmental strategic plans, APPs and operational plans?	Plans are regularly revised and this negatively affect implementation. Although most APPs contain a Food Security line item, this is small and at a national level represents only a tiny portion of the Agriculture budget.
9. Is there appropriate **leadership** for nutrition at the respective levels and are they empowered to play that role?	See response to Question 5.
10. Are there **relevant workers** (not necessarily professional dieticians or nutritionists) to address nutrition-related interventions?	Staff vacancies in Food security are widespread. In addition, many existing staff have little to no training in nutrition.
11. 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?	Most respondents in this evaluation believe that Food Security staff have limited to no knowledge and skills in nutrition and they require additional training.
12. Do the PHC and other service facilities have the necessary equipment, guidelines, protocols, and supplies to deal with nutrition in under-five children?	No nutrition-sensitive standards or guidelines appear to exist for seed packs that are distributed as part of food security interventions. In addition, there have been reports of stockouts of seeds or delayed delivery of seeds due to poor or slow procurement processes.
13. Do service standards/norms exist for relevant interventions?	See answer to Question 12. In addition to the IFSS, in KZN, respondents mentioned the War On poverty guidelines especially for profiling households.
14. Are resources allocated appropriately and sufficiently (this would draw on international evidence of cost-benefits)?	In 2011/12, approximately 25% of the DAFF expenditure was for Food Security activities, although this percentage is lower than for previous years.
15. 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 (e.g. community-based services such as nutrition advisors, and platforms for community involvement)? How extensive are these? *How are children accessed at community level? Are the newly deployed community health workers (under PHC re-engineering) engaged in nutrition services delivery?*	Support to farmers at community level is the main delivery channel for food security interventions. However, the frequency and intensity of contact with farmers is not possible to determine, but most likely needs to be increased to ensure sufficient support to meet the goals of expanded production.
16. 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	DAFF works at community level, but there appears to be a tension in its strategy between supporting small holders for producing food for market vs supporting subsistence farmers to produce food for consumption. Most of the output 2 activities are aimed at small holder farmers to help them become more productive and sell their

Evaluation Question	Food security (output 2 of outcome 7)
the effectiveness of nutrition interventions?	production. While this is legitimate, it is not nutrition focused. One possible approach to increase the nutrition sensitivity of the Food Security support to small farmers is to replicate the experience of Brazil, whereby small holder farmers are supported to produce nutritionally dense food that is then purchased for use in Food Access interventions (i.e. Food Parcels, Soup Kitchens, Food Banks) and for "people's restaurants". The support to subsistence farmers should be either transferred to, or better linked to DSD's Sustainable Livelihoods interventions and reconfigured to better address nutritional quality of diets, rather than quantity of food consumed. .
17. What **monitoring and evaluation systems** are in place and needed to monitor and improve the evidence base for and implementation of nutrition-related interventions?	There are 12 Indicators for Output 2 of Outcome 7[17] and all are focused on various food security inputs and activities. However, there is a lack of clarity around the linkages between the 12 indicators and the objectives and targets of Output 2 as presented in the Answer to Question 1. Furthermore, only 2 indicators relate to the specific objectives of supporting small holders and subsistence farmers to increase the profitability of their production. There is no specific nutrition or consumption indicator.

[17] Indicators and targets are http://www.thepresidency.gov.za/MediaLib/Downloads/Home/Ministries/DepartmentofPerformanceMonitoringandEvaluation3/TheOutcomesApproach/Delivery%20Agreement%20-%20Outcome%207%20%20Appendix%202.pdf

10. Growth Monitoring and Promotion

Growth Monitoring (GM) is the process of following the growth rate of a child in comparison to a standard through periodic, frequent measurements. Growth Monitoring and Promotion (GMP) is a prevention activity comprised 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 program. As an intervention, GMP is designed to affect family-level decisions and individual child nutritional outcomes.

Evaluation Question	Growth Monitoring and Promotion including the use of MUAC
1. 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? Are there policy gaps? *Are food and nutrition policies sensitive to needs of children Under 5?*	There are no separate policies specifically governing GMP, but there are a wide range of health guidelines that refer to the importance of monitoring the growth of children U5, including: • the Strategic Plan for Maternal, Newborn, Child and Women's Health (MNCWH) and Nutrition (2012) • IMCI guidelines, • IYCF Feeding Guidelines, • Guidelines for Community-Based Nutrition Interventions • the Guidelines for Management of Moderate and Severe Malnutrition, and • the Road to Health Booklets. However, no separate guidelines exist for GMP separate from the list above. These guidelines are sensitive to the needs of children U5. Funding for these is integrated into the DOH budget.
2. 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?	Not Applicable.
3. 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?	GMP is not pulling mothers and children into health facilities like immunizations, because there is a drop off in health services utilization after 6-9 months of age. This demonstrates: • a lack of understanding among mothers of the importance of Growth monitoring • Limited GM at community level due to problems of transport and staffing at community level Some NGOs/CBOs carry out GM in communities, but this is not widespread.
4. Are **high impact interventions** being prioritised in practice? *Are high impact interventions budgeted for in provincial Annual Performance Plans (APPs) and district health plans?*	Not Applicable.

<table>
<tr><th>Evaluation Question</th><th>Growth Monitoring and Promotion including the use of MUAC</th></tr>
<tr><td>5. What interventions are being implemented effectively, what aren't?</td><td>Implementation of the GM intervention needs improvement. There are implementation problems with GM, mainly around:
Missed opportunities to weigh the child
Poor recording of weights and heights
Lack of plotting
Inaccuracies in plotting and interpreting the results
Absence of counselling based on interpretation
Factors that inhibit effective implementation:
insufficient staff and poor training
lack of supportive supervision from higher levels (due to staff constraints and/or transport)
limited reach at community level; limited use of CHWs or NGOs for community-based GMP
missing equipment and Road to Health Cards in facilities</td></tr>
<tr><td>6. Why are some interventions not being implemented effectively and efficiently, and what is needed to strengthen, upscale, and sustain them? Sub-questions include:</td><td>See answer to question 5.</td></tr>
<tr><td>7. How far is nutrition mainstreamed into the work of relevant services which impact directly on children? .</td><td>GM is mainstreamed into the day-to-day work of the nurse in health facilities.</td></tr>
<tr><td>8. Are there appropriate plans to implement these nutrition interventions, are they included in departmental strategic plans, APPs and operational plans?</td><td>GM is integrated into the plans for services provided at facility level to children under 5. There is no separate APP or operational plan for GM separate from those for the health department.</td></tr>
<tr><td>9. Is there appropriate leadership for nutrition at the respective levels and are they empowered to play that role?</td><td>GM is integrated into the leadership structure governing all health and nutrition services. There are no separate leaders for GM.</td></tr>
<tr><td>10. Are there relevant workers (not necessarily professional dieticians or nutritionists) to address nutrition-related interventions?</td><td>Given general staff shortages and high workloads at health facility level, there is evidence that GM tasks are not done adequately, particularly for plotting and interpreting GM data in RTH booklets. Many respondents at facilities noted the need for additional nutrition counsellors or nutrition advisors to assist with the range of nutrition activities at clinic level, including GM. There is also a risk that untrained staff / volunteers are given responsibility for GM to reduce nurses' workloads. .</td></tr>
<tr><td>11. 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?</td><td>Skills need improvement in 40% of health workers interviewed. Only 60% of health workers reported that they would weigh a child who is not growing well.</td></tr>
<tr><td>12. Do the PHC and other service facilities have the necessary equipment, guidelines, protocols, and supplies to deal with nutrition in under-five children?</td><td>In health facilities, most had functioning scales, but length measuring boards and MUAC tapes were missing in nearly 20% of facilities, and more so in EC and FS.<table><tr><th>Functioning Baby weighing scales</th><th>Functioning Adult weighing scales</th><th>Length measuring boards</th><th>MUAC (mid-upper arm circumference) tapes</th></tr><tr><td>97%</td><td>91%</td><td>74%</td><td>82%</td></tr></table>Only 74% of health facilities had Road to Health cards, and 50% experienced stockouts in the previous 6 months.</td></tr>
</table>

Evaluation Question	Growth Monitoring and Promotion including the use of MUAC
13. Do service standards/norms exist for relevant interventions?	The Road to Health Booklet and the Guidelines for Community-Based Nutrition Interventions provide standards and norms for GM in all provinces. No provincial adaptations have occurred.
14. Are resources allocated appropriately and sufficiently (this would draw on international evidence of cost-benefits)?	Staffing and supplies are an issue per the responses in answers to Questions 5 and 12.
15. 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 (e.g. community-based services such as nutrition advisors, and platforms for community involvement)? How extensive are these? *How are children accessed at community level? Are the newly deployed community health workers (under PHC re-engineering) engaged in nutrition services delivery?*	There are appropriate systems and structures (e.g. CHWs, HCBCs, NGOs, etc.) but these are not effectively used to extend the reach of GM into the community. We weren't able to determine the extent to which the newly deployed CHWs were engaged in GM, as all data on government services was collected in health facilities and at management levels.
16. 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?	Within DOH services, GM is part and parcel of BANC, maternity, post-natal, and child health services. Between DOH and other government departments there are no institutional arrangements, although GM has been successfully linked to social services and home garden interventions in other countries, using community-based workers who provide services to individual households. This is gap that could be addressed.
17. What **monitoring and evaluation systems** are in place and needed to monitor and improve the evidence base for and implementation of nutrition-related interventions?	There are 2 indicators in the DHIS that build on GM data: *"Children under 2 years newly diagnosed as underweight (weight between -2 and -3 Standard Deviations) per 1,000 children under 2 years in the population."* *Children under 5 years newly diagnosed with severe acute malnutrition per 1,000 children under 5 years in the population* In KZN, there are numerous nutrition indicators, including an indicator related to GM: *Not gaining weight rate under 5 years.* The general lack of a stunting indicator is problematic, given that stunting is the major nutrition problem in South Africa among children U5. The absence of length / height equipment in many facilities also impedes the tracking of stunting.

11. Household Food Production / Food Preservation (Home Gardens)

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 home 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. However, the recently revised DAFF Strategic Plan (2013/14-2017/18) omits any reference to home gardening, and rather focuses on support to small holder farmers to increase their profitability, with a focus on food production for sale rather than consumption. As a result, the DSD now promotes home gardening as part of its Sustainable Livelihoods programme.

Evaluation Question	Household Food Production / Food Preservation (home gardens)
1. 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? Are there policy gaps? *Are food and nutrition policies sensitive to needs of children Under 5?* *Are food and nutrition policies funded?*	There are no policies that specifically govern Household food production and preservation, but there are various documents which guide the implementation of the intervention. • Food Security Policy for South Africa • Operation Sukuma Sakhe • Integrated Food and Nutrition Strategy • Food Security Strategy • Ilima Letsema Tools for Profiling households These guidelines are not sensitive to the needs of children U5. Funding for these is integrated into provincial Agriculture budgets. However provinces interpret national policies and guidelines differently, and as a result the budget allocations and subsequent expenditures for food security and household food production do not follow recommendations
2. 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?	Not Applicable. But there is evidence that several food companies assist in promoting home gardens, including Nestle's community nutrition programmes, Engen, Absa, and the Woolworths Trust fund the EduPlant programme which focusses on providing information on permaculture and cultivating self-sustainable gardens. re
3. 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?	Household food production and preservation influence varies across provinces. Some NGOs/CBOs support HHP in communities, but this is not widespread • The intervention itself does not directly target children under 5 • Some respondents feel it involves a lot of work, and thus they cannot do it.
4. Are **high impact interventions** being prioritised in practice? *Are high impact interventions budgeted for in provincial Annual Performance Plans (APPs) and district health plans?*	Not Applicable.

Evaluation Question	Household Food Production / Food Preservation (home gardens)
5. What interventions are being **implemented effectively**, what aren't?	HHP implementation needs to be improved and problems are mainly around: • There is little evidence to show that HHP is nutrition sensitive • It does not directly target pregnant women and women below the age of 5 • absence of activities specifically aimed at increasing nutritional status Factors that inhibit effective implementation: • Insufficient staff and lack of nutrition training • lack of supportive supervision from higher levels (due to staff constraints and/or transport) • limited reach at community level; Limited to no collaboration with the private sector
6. **Why** are some interventions not being implemented effectively and efficiently, and what is needed to strengthen, upscale, and sustain them? Sub-questions include:	Although HHP aims to address food security, the focus is on growing more food for consumption or marketing, rather than improving the quality and diversity of the diet and increasing consumption for improved nutritional status. All home food production activities under Food Security focus exclusively on providing seeds model, and contain no elements of growth monitoring or nutrition education
7. How far is nutrition **mainstreamed** into the work of relevant services which impact directly on children? .	HHP is mainstreamed into the day-to-day work of agricultural extension officers however this does not directly focus on children.
8. Are there appropriate **plans** to implement these nutrition interventions, are they included in departmental strategic plans, APPs and operational plans?	HHP is integrated into the plans for services provided under food security programme by DRDL, DSD Sustainable livelihoods programme, and DRDL Comprehensive Rural Development programme. There is no separate APP or operational plan for HHP.
9. Is there appropriate **leadership** for nutrition at the respective levels and are they empowered to play that role?	In agriculture, there is no separate leadership for HHP but it is integrated into the leadership structure governing all Food Security services. However, given that the agriculture departments have shifted to a focus on improving the "profitability" of food production (mainly through marketing food produced, rather than encouraging consumption), the DSD's Sustainable Livelihoods programme appears to have filled this space.
10. Are there **relevant workers** (not necessarily professional dieticians or nutritionists) to address nutrition-related interventions?	Human capacity is the main constraint to HHP across the provinces. Coupled with general staff shortages there is also lack of well-trained managers and field extension offices which inhibits the intervention.
11. 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?	Staff lack skills and it limits their ability to address the needs at scale. Of the Food Security people interviewed only one had pre-service training in nutrition.
12. Do the PHC and other service facilities have the necessary equipment, guidelines, protocols, and supplies to deal with nutrition in under-five children?	Not Applicable.
13. Do service standards/norms exist for relevant interventions?	Each province has varying norms/standards which guide implementation, however they are mostly policy level documents and very few appear to guide operations at community level.

Evaluation Question	Household Food Production / Food Preservation (home gardens)
14. Are resources allocated appropriately and sufficiently (this would draw on international evidence of cost-benefits)?	There is insufficient leadership, human resources, technological resources, and management to effectively implement food security and household food production interventions. The budget has also been diminishing over the years.
15. 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 (e.g. community-based services such as nutrition advisors, and platforms for community involvement)? How extensive are these? *How are children accessed at community level? Are the newly deployed community health workers (under PHC re-engineering) engaged in nutrition services delivery?*	There are appropriate systems and structures (e.g. CCGs, NGOs, CBOs, Community projects etc.) but these are not effectively used to extend the reach of HHP into the community and they do not target children U5.
16. 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?	HHP is part of the food security services under DOA, however there is no evidence of DAFF working synergistically in the promotion and implementation of home gardening for nutrition with other departments.
17. What **monitoring and evaluation systems** are in place and needed to monitor and improve the evidence base for and implementation of nutrition-related interventions?	There is an absence of standardised measures of food security in South Africa, and regularised ways of collecting and reporting them at provincial, district, and local levels. There are various M&E approaches carried out for the establishment of household gardens, but there appears to be no tracking of any food preservation activities, and there is no tracking of the intervention's effects in terms of food consumption or nutritional status

12. Integrated Management of Childhood Illnesses (IMCI)

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.

Evaluation Question	Integrated Management of Childhood Illnesses
1. 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? Are there policy gaps? *Are food and nutrition policies sensitive to needs of children Under 5?* *Are food and nutrition policies funded?*	There are dedicated guidelines governing the Integrated Management of Childhood Illnesses (IMCI) and are based on the international guidelines issued by WHO and UNICEF. In addition, the interventions encompassed in the IMCI approach are also addressed in other policies which address infant and child health such as: • the Strategic Plan for Maternal, Newborn, Child and Women's Health (MNCWH) and Nutrition (2012-2016) • Standard Treatment Guidelines and Essential Medicines List for South Africa (PHC Level), 2008 • the Guidelines for Management of Moderate and Severe Malnutrition The IMCI guidelines as well as the other related strategies and guidelines mentioned above are sensitive to the needs of children U5. Funding for IMCI is integrated into the DOH budget.
2. 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?	Not Applicable.
3. 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?	As practiced in South Africa, IMCI is a facility-based intervention. In health facilities, the IMCI strategy promotes the accurate identification of childhood illnesses in outpatient settings, ensures appropriate combined treatment of all major illnesses, strengthens the counselling of caretakers, and speeds up the referral of severely ill children. Unlike the case for routine health services, most mothers bring their children to health facilities when they are sick.
4. Are **high impact interventions** being prioritised in practice? *Are high impact interventions budgeted for in provincial Annual Performance Plans (APPs) and district health plans?*	Not applicable. *Although many of the interventions integrated under IMCI are listed as high impact interventions in the list of 18 Nutrition Interventions, IMCI itself is not.*

Evaluation Question	Integrated Management of Childhood Illnesses
5. What interventions are being **implemented effectively**, what aren't?	While the clinical aspects of IMCI seem to be implemented as expected, the health and nutrition counseling that is supposed to accompany the various interventions do not appear to be as well implemented. There are various initiatives to implement community-based IMCI across the country. The extent to which this is being put in place varies by province with KZN having made the most progress. This effort is being supported by UNICEF, amongst others.
6. **Why** are some interventions not being implemented effectively and efficiently, and what is needed to strengthen, upscale, and sustain them? Sub-questions include:	As discussed in the response to Question 5, the counseling that is meant to go along with the IMCI intervention appears to be very limited and, at times, non-existent. This may be explained by nurses "saving time" by not doing counseling due to the reported shortage of staff in health facilities and the associated pressure to see patients as quickly as possible in order to address the workload. Another factor affecting the effective implementation is the fact that not all nurses at the facility level are trained in IMCI, thus the approach is not as widely practiced at it might otherwise be. An integral part of an effectively implemented IMCI intervention is the presence of regular supportive supervision. However, in all four provinces, insufficient staff and logistical constraints have limited the amount of supervision that takes place. In addition, issues that affect the effective delivery of the individual nutrition interventions included in IMCI also affect the effective implementation of IMCI.
7. How far is nutrition **mainstreamed** into the work of relevant services which impact directly on children? .	Most of the interventions integrated under IMCI are mainstreamed into regular functioning of health facilities. However, the practice of the IMCI approach is not as fully integrated into the normal duties of all health care workers as it requires one to have undergone specialized training in the approach. Training for IMCI consists of a structured 11-day training course that combines classroom work with clinical practice.
8. Are there appropriate **plans** to implement these nutrition interventions, are they included in departmental strategic plans, APPs and operational plans?	IMCI is more or less integrated into the plans for services provided at facility level to children under 5. There is no separate APP or operational plan for this intervention apart from those for the health department.
9. Is there appropriate **leadership** for nutrition at the respective levels and are they empowered to play that role?	There are no separate leaders for IMCI. Instead, leadership for IMCI is integrated into the regular leadership structure governing all health and nutrition services for children under 5.
10. Are there **relevant workers** (not necessarily professional dieticians or nutritionists) to address nutrition-related interventions?	IMCI trained nurses are in most health facilities. However, not all nurses in health facilities have been trained in IMCI. In EC and KZN, CHWs assist in identifying sick children in the communities and referring them to the health facilities. And in EC, IMCI-trained CHWs assist with some of the routine health monitoring activities in health facilities e.g. weighing children, checking road to health booklets, etc. and assist nurses with outreach work.
11. 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?	Nurses at the facility level are trained to implement all the interventions integrated within IMCI. However, not all nurses have received IMCI training and are not necessarily equipped to approach the management of a sick child in the systematic and integrated manner laid out in IMCI.

Evaluation Question	Integrated Management of Childhood Illnesses
12. Do the PHC and other service facilities have the necessary equipment, guidelines, protocols, and supplies to deal with nutrition in under-five children?	The availability of the IMCI guidelines at the facility level was not checked as part of this evaluation. However, during data collection, most respondents referred to the IMCI guidelines as guiding their implementation of many of the facility-based nutrition interventions reviewed indicating their familiarity with and use of the guidelines. The equipment and supplies required for IMCI are the same ones required for the individual interventions integrated into IMCI and their availability is covered in the discussions related to the individual interventions. The same applies with issues of stock outs.
13. Do service standards/norms exist for relevant interventions?	The IMCI guidelines lay out the protocol that needs to be followed when managing childhood illnesses. While some provinces have developed their own IMCI guidelines, these are based on the international guidelines issued by WHO and UNICEF.
14. Are resources allocated appropriately and sufficiently (this would draw on international evidence of cost-benefits)?	The fact that not all nurses at the facility level are IMCI trained was raised as an issue that is limiting the effectiveness of IMCI implementation. The shortage of staff in general, coupled with the fact that only a limited number of nurses are trained in each of the facilities visited has led to nurses limiting (or eliminating) the counseling element of IMCI.
15. 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 (e.g. community-based services such as nutrition advisors, and platforms for community involvement)? How extensive are these? *How are children accessed at community level? Are the newly deployed community health workers (under PHC re-engineering) engaged in nutrition services delivery?*	In South Africa, IMCI has traditionally been viewed as a facility based intervention. Increasingly, however, more and more provinces are beginning to introduce community-based IMCI as a way of bringing timely nutrition interventions closer to children and their care givers. This will further be strengthened by the PHC re-engineering currently underway.
16. 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?	IMCI is increasingly becoming integrated into DOH facility based services. Encouragingly, in several provinces, community based IMCI is extending the reach of nutrition interventions to the community.
17. What monitoring **and evaluation systems** are in place and needed to monitor and improve the evidence base for and implementation of nutrition-related interventions?	There are several nutrition indicators under the IMCI Indicator Group within the DHIS. These are as follows: • Child *under 5 years diarrhoea with dehydration incidence (annualised)* • *Child under 5 years severe acute malnutrition incidence (annualised)* • *Child* under *5 years severe acute malnutrition case fatality rate* • Deworming *dose 12-59 months coverage (annualised*)

13. Improving Hygiene Practice (including in relation to water and sanitation)

Improved water quality, improved disposal of human excreta, and interventions that promote hand washing have been shown to reduce diarrhoea[18]. While the association between diarrhoea and child nutritional outcomes is complex, recent analysis suggests that repeated diarrhoea incidence in the first two years of life significantly increases the risks of being stunted by age two years, and that some water, sanitation and hygiene interventions (specifically solar disinfection of water, provision of soap, and improvement of water quality) may improve height growth in children under five years of age[18].

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.

Evaluation Question	Improving hygiene practice (including in relation to water and sanitation)
1. 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? Are there policy gaps? *Are food and nutrition policies sensitive to needs of children Under 5?* *Are food and nutrition policies funded?*	There is a Draft National Health and Hygiene Education Strategy related to Water Supply and Sanitation Services (2006)[19] which specifies the institutional arrangements, key message content, and recommended implementation approaches. There is also a Strategic Framework for Water Services (2003)[20] . There is also a Circular Minute No. 3 of 2012: Roles and Responsibilities of Different Cadres to reduce diarrhoeal disease in districts[21]. All 3 documents highlight the need and importance of hygiene education and practice. The documents reference the importance of hygiene for children under five, but don't specifically target households with this age group.

[18] Dangour AD, L Watson, O Cumming, S Boisson, Y Che, Y Velleman, S Cavill, E Allen, R Uauy. *Interventions to improve water quality and supply, sanitation and hygiene practices, and their effects on the nutritional status of children (Review).* Cochrane Library. 2013, Issue 8. August 2013. http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD009382.pub2/abstract

[19] http%3A%2F%2Fwww.umdm.gov.za%2Findex.php%3Foption%3Dcom_docman%26task%3Ddoc_download%26gid%3D765%26Itemid%3D493&ei=oHZBUr7SNcHe7AbS2IGYAg&usg=AFQjCNGZ0L7QIEUzRaBgxGvBpbIo3_7FNQ&sig2=-k2vesxnH021V_BekwI4uw&bvm=bv.52434380,d.ZGU

[20] http://www.info.gov.za/view/DownloadFileAction?id=70217

[21] http://www.doh.gov.za/docs/programmes/2013/Reduce_Diarrhoeal_Diseases_in_Health_Districts.pdf

Evaluation Question	Improving hygiene practice (including in relation to water and sanitation)
2. 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?	Not Applicable. Private Industry involvement in Hygiene: But UNICEF and the Unilever Foundation have a partnership to promote behaviour change related to hygiene and sanitation practices in South Africa[22]. It includes a focus on community health care strengthening and the training of Community Care Givers (CCG), as part of reforms to the country's primary health care system. CCGs outreach to women and children via monthly home visits to promote family care, health and sanitation and hygiene awareness/practices. Nestle also has a training module on hygiene in its courses at the Nestle Nutrition Institute Africa (www.nnia.org) Dettol conducts education on hygiene in schools through its "Detto" schools programme (started in 2009), and supports the Pick 'n Pay Schools Club. Dettol also conducts H&HE for new and expectant mothers in public and private health institutions, providing education on the importance of good hygiene practice -- in 2010 and 2011, 500 000 mothers were reached in public institutions and a further 140,000 in private institutions. Dettol also provides community-level education on hygiene through distributing educational materials, water bags, and Dettol soap bars. (http://www.dettol.co.za/health-for-more.php)
3. 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?	Water and sanitation coverage has increased dramatically since 1994, but there are still urban and rural discrepancies[23]. Drinking water coverage: Urban: 99%, Rural: 79%, Total: 91% Sanitation Coverage: Urban:93% Rural: 63% Total: 82% Regarding hygiene education, a recent review indicated limited to no integration of H&HE with toilet construction and limited or no budgets were allocated to H&HE -- although the main objective of sanitation service delivery was the improvement of health, 66% of households did not receive any sanitation, health or hygiene education during the implementation of sanitation infrastructure[24]
4. Are **high impact interventions** being prioritised in practice? *Are high impact interventions budgeted for in provincial Annual Performance Plans (APPs) and district health plans?*	Not Applicable. This is not a high impact intervention, but it is not being prioritised in practice. According to the study mentioned above, there is no budget allocated to this component.

[22] http://www.unicef.org/southafrica/media_11962.html

[23] WHO / UNICEF. *Joint Monitoring Programme (JMP) for Water Supply and Sanitation. 2013*. http://www.wssinfo.org/data-estimates/table/

[24] Mjoli, N. Review of Sanitation Policy and Practice in South Africa from 2001-2008. Report to the Water Research Commission. 2010. http://www.wrc.org.za/Knowledge%20Hub%20Documents/Research%20Reports/1741-1-09%20Developing%20Communities.pdf

Evaluation Question	Improving hygiene practice (including in relation to water and sanitation)
5. What interventions are being **implemented effectively**, what aren't?	See response to question 6. In the health sector, many respondents indicated that this intervention is not being implemented effectively, mainly because it is given so little attention by health workers during implementation.
6. **Why** are some interventions not being implemented effectively and efficiently, and what is needed to strengthen, upscale, and sustain them? Sub-questions include:	The study mentioned in the Answer to Question 3 states that hygiene education was not prioritised "because (i) funds allocated for H&HE were used for other items, (2) there was no monitoring of H&HE, and (3) compliance was not enforced. Specific issues relevant to H&HE such as availability of hand washing facilities next to the toilet, easy access to water and availability of soap for hand washing were not monitored. Most municipalities implemented H&HE as a once-off intervention that was linked to the delivery of basic sanitation infrastructure. The Bucket Eradication Programme did not include any H&HE and user education was limited to households provided with alternative sanitation technologies. The assumption was that all households already knew how to operate and maintain their waterborne sanitation facilities".
7. How far is nutrition **mainstreamed** into the work of relevant services which impact directly on children? .	See response to Question 5.
8. Are there appropriate **plans** to implement these nutrition interventions, are they included in departmental strategic plans, APPs and operational plans?	Data not available.
9. Is there appropriate **leadership** for nutrition at the respective levels and are they empowered to play that role?	Most respondents perceive the leadership for this intervention residing with the Department of Water Affairs and Human Settlements, but few could comment on the adequacy of leadership.
10. Are there **relevant workers** (not necessarily professional dieticians or nutritionists) to address nutrition-related interventions?	The study mentioned in the answer to Question 3 states that there is a need to clarify the roles and responsibilities for H&HE between Water Services Authorities, Department of Water Affairs and the DOH.
11. 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?	Most H&HE is meant to occur in conjunction with toilet construction, and such construction projects are done mainly by local municipalities. But the local municipalities have shortage of technical and management skills to ensure that these projects are managed and delivered appropriately[24]. Some hygiene education should be occurring when mothers choose to bottle feed, but given the respondents in this evaluation who said that bottle feeding practice is quite unsanitary, it seems that the H&HE around bottle feeding is not as effective as it should be.
12. Do the PHC and other service facilities have the necessary equipment, guidelines, protocols, and supplies to deal with nutrition in under-five children?	The adequacy of equipment, guidelines, and protocols for H&HE delivered as part of toilet construction is unknown. In the health sector, hand washing posters were only available in 68% of health facilities visited.
13. Do service standards/norms exist for relevant interventions?	Yes the Strategic Plan for Hygiene Education has a list of standard topics to be covered as part of H&HE.
14. Are resources allocated appropriately and sufficiently (this would draw on international evidence of cost-benefits)?	Per the answer to question 6, there is no budget allocated to H&HE.

Evaluation Question	Improving hygiene practice (including in relation to water and sanitation)
15. 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 (e.g. community-based services such as nutrition advisors, and platforms for community involvement)? How extensive are these? *How are children accessed at community level? Are the newly deployed community health workers (under PHC re-engineering) engaged in nutrition services delivery?*	See answer to Question 6. In the health sector, Hygiene education is delivered through health education talks at health facilities and at community level through the CHWs, Health promotion, CCGs, and campaigns. These channels are reportedly effective in reaching targeted groups.
16. 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?	At national level, there are coordination structures between DWAF, DOH, and Department of Housing around H&HE; for instance, DWAF and DOH developed a Health and Hygiene Education Strategy[24]. At provincial level this is not the case, as water and sanitation do not fall under a provincial government level; local government has the role of providing for household sanitation. Moreover, local government tends to have gaps in addressing the following elements of sanitation strategies (including H&HE): standards and norms; understanding of sanitation within the context of integrated planning (rural and urban dimensions); agreement on implementation processes; research analysis and knowledge sharing quality and content; integration of health and hygiene education into sanitation infrastructure delivery projects; and monitoring and evaluation of sanitation service delivery[24].
17. What **monitoring and evaluation systems** are in place and needed to monitor and improve the evidence base for and implementation of nutrition-related interventions?	There are no clear indicators or targets for H&HE at community level. The indicators that do exist are around incorporating H&HE into the school curriculum, but this is outside the primary target group. There is need for behaviour change indicators for H&HE. It has been recommended that an M&E system for hygiene awareness should be developed and H&HE should be part of the water services regulatory framework

14. Management of Severe Malnutrition

WHO states that severe malnutrition is both a medical and a social disorder, whereby the medical problems result in part from the social problems in the home where the child lives. 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 malnourished children require 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.

Evaluation Question	Management of Severe Malnutrition
1. 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? Are there policy gaps? *Are food and nutrition policies sensitive to needs of children Under 5?* *Are food and nutrition policies funded?*	The main guideline governing the Management of Severe Malnutrition is the WHO Ten Steps for the Management of Children with Severe Malnutrition. However, other policies and/or guidelines address this intervention to varying degrees. Some of these are: – the Strategic Plan for Maternal, Newborn, Child and Women's Health (MNCWH) and Nutrition (2012-2016) (Zinc) – IMCI guidelines (ORS and Zinc) – Standard Treatment Guidelines and Essential Medicines List for South Africa (PHC Level), 2008 (ORS and Zinc) – the Guidelines for Management of Moderate and Severe Malnutrition (ORS) These guidelines are sensitive to the needs of children U5. Funding for the management of severe malnutrition is integrated into the DOH budget.
2. 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?	Not Applicable.
3. 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?	Unlike the case for routine health services, most mothers bring their children to health facilities in cases of severe malnutrition.

Evaluation Question	Management of Severe Malnutrition
4. Are **high impact interventions** being prioritised in practice? *Are high impact interventions budgeted for in provincial Annual Performance Plans (APPs) and district health plans?*	The Management of Severe Malnutrition is prioritized by all levels of the health department and is included in key strategies and guidelines addressing infant and child health. Costing for the management of severe malnutrition is incorporated in the nutrition budgets of the different levels of the health system.
5. What interventions are being **implemented effectively**, what aren't?	Health facilities reported that all cases of severe malnutrition were referred to hospitals for management according to the guidelines. It was also mentioned that with the increasing involvement of CHWs at the community level with growth monitoring activities (mainly using MUAC tapes), cases of severe malnutrition are being identified and referred to the health facilities sooner.
6. **Why** are some interventions not being implemented effectively and efficiently, and what is needed to strengthen, upscale, and sustain them? Sub-questions include:	A factor affecting the effective implementation of Management of Severe Malnutrition is the fact that mothers tend to bring their children to health facilities late. This needs to be addressed both through the early identification of malnutrition by CHWs (as part of the PHC re-engineering) as well as through sufficient nutrition counseling to mothers and care givers by health care workers at every possible opportunity.
7. How far is nutrition **mainstreamed** into the work of relevant services which impact directly on children? .	The protocol for the Management of Severe Malnutrition is incorporated into IMCI and the Standard Treatment Guidelines and Essential Medicines List for South Africa (PHC Level). . While the Management of Severe Malnutrition is mainly carried out at hospitals, nurses at health facilities are responsible for stabilizing the child while awaiting transfer to the hospital. In cases where community based management is available (e.g. KZN) the nurse at the health facility determines whether the child can be treated in the community with regular visits to the health centre, or whether referral to in-patient care is required.
8. Are there appropriate **plans** to implement these nutrition interventions, are they included in departmental strategic plans, APPs and operational plans?	The Management of Severe Malnutrition is integrated into the plans for services provided at facility and hospital levels to children under 5. There is no separate APP or operational plan for this intervention apart from those for the health department.
9. Is there appropriate **leadership** for nutrition at the respective levels and are they empowered to play that role?	The Management of Severe Malnutrition is integrated into the leadership structure governing all health and nutrition services for children under 5. There are no separate leaders for the intervention.
10. Are there **relevant workers** (not necessarily professional dieticians or nutritionists) to address nutrition-related interventions?	Yes, nurses at the facilities are trained in the Management of Severe Malnutrition – either as stand-alone training or as part of IMCI training. The intervention is fully integrated into the normal duties of nurses and none of the facilities visited reported staff shortages as affecting the delivery of this intervention.
11. 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?	Facility level health workers reported being trained in the management of severe malnutrition. The knowledge level of nurses with regard to the management of severe malnutrition was, however, not assessed as part of this evaluation.

Evaluation Question	Management of Severe Malnutrition
12. Do the PHC and other service facilities have the necessary equipment, guidelines, protocols, and supplies to deal with nutrition in under-five children?	Two thirds of health facilities visited had the necessary guidelines available and an even higher number had the necessary equipment for assessing the severity of malnutrition. However, lack of IEC materials appears to be an issue with less than half of health facilities having any pamphlets or posters about the intervention.
13. Do service standards/norms exist for relevant interventions?	While all four provinces use the protocol spelled out in the WHO Ten Steps for the Management of Severe Malnutrition as well as the IMCI guidelines and the Standard Treatment Guidelines and Essential Medicines List for South Africa (PHC Level), KZN has expanded this intervention beyond health facilities to include community based management of severe malnutrition. Several cases of adaptation of the IMCI guidelines were found at the provincial level but the core protocol appears to be the same as that set forth in the national and international guidelines. All health facilities visited had the necessary referral mechanism for referring children with severe malnutrition.
14. Are resources allocated appropriately and sufficiently (this would draw on international evidence of cost-benefits)?	Staffing and supplies do not appear to be an issue in the Management of Severe Malnutrition.
15. 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 (e.g. community-based services such as nutrition advisors, and platforms for community involvement)? How extensive are these? *How are children accessed at community level? Are the newly deployed community health workers (under PHC re-engineering) engaged in nutrition services delivery?*	The Management of Severe Malnutrition is an intervention which is mainly delivered through hospitals. As mentioned earlier, KZN is extending the intervention to include community-based management. Going forward, PHC re-engineering will make it possible to involve CHWs in the active identification and referral of cases and, eventually, community-based management of severe malnutrition may also become a reality in the other provinces. For this evaluation, we were not able to determine the extent to which the newly deployed CHWs have started to contribute to this intervention due to the fact that all data on government services was collected in health facilities and management levels.
16. 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?	The Management of Severe Malnutrition is an integral part of DOH facility based services.

Evaluation Question	Management of Severe Malnutrition
17. What **monitoring and evaluation systems** are in place and needed to monitor and improve the evidence base for and implementation of nutrition-related interventions?	There are two indicators in the DHIS which monitor the implementation of this intervention. They are as follows: 1. *"Child under 5 years severe acute malnutrition incidence (annualised)" – defined as Children under 5 years newly diagnosed with severe acute malnutrition per 1,000 children under 5 years in the population. This indicator is an outcome indicator and monitors prevention and diagnosis of severe acute malnutrition in children under 5 years and is counted only upon diagnosis.* 2. *" Child under 5 years severe acute malnutrition case fatality rate' – defined as Proportion of children under 5 years admitted with severe acute malnutrition who died, This indicator monitors the treatment outcome for children under 5 years who were admitted with severe acute malnutrition. Includes under 1 year severe acute malnutrition deaths as defined in the IMCI guidelines e* While these indicators monitor the interaction between the child with severe malnutrition and the health system, it does not give a true picture of the prevalence of severe malnutrition within the community i.e. the many more children who do not make it to the health facility.

15. Micronutrient Supplementation including Vitamin A

Poor nutrition in childhood, especially in the first 2 years of life, can slow a child's physical and mental development for the rest of his/her life. 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.

Evaluation Question	Micronutrient including Vitamin A supplementation*
1. 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? Are there policy gaps? *Are food and nutrition policies sensitive to needs of children Under 5?* *Are food and nutrition policies funded?*	While there don't appear to be any stand-alone policies or guidelines governing Vitamin A supplementation there are various guidelines that incorporate the intervention as one of many key interventions to be delivered to children under 5 years of age: Some of the major ones are listed below: – the Strategic Plan for Maternal, Newborn, Child and Women's Health (MNCWH) and Nutrition (2012-2016) – IMCI guidelines, – Standard Treatment Guidelines and Essential Medicines List for South Africa (PHC Level), 2008 – Guidelines for Community-Based Nutrition Interventions – the Guidelines for Management of Moderate and Severe Malnutrition, and – the Road to Health Booklets. These guidelines are sensitive to the needs of children U5. Funding for Vitamin A Supplementation is integrated into the DOH budget.
2. 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?	Not Applicable.

Evaluation Question	Micronutrient including Vitamin A supplementation*
3. 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?	Routine Vitamin A Supplementation to children between the ages of 6 to 59 months is meant to be administered every 6 months. However, mothers tend not to bring their children to health facilities unless their child needs to be immunized or is sick. National Vitamin A coverage as captured by the DHIS indicator - % of children age 1 to 5 years who receive at least one dose of Vitamin A per year currently stands at 42% compared to 90% of children fully immunised by 1 year. This highlights: • a lack of understanding among mothers of the importance of Vitamin A Supplementation and other routine health promoting interventions • the currently limited opportunities available for health workers to deliver such services at the community level through outreach programmes due to lack of transport and staff shortages.
4. Are **high impact interventions** being prioritised in practice? *Are high impact interventions budgeted for in provincial Annual Performance Plans (APPs) and district health plans?*	Vitamin A Supplementation for children 6-59 months of age is prioritized and is featured in all key strategies and guidelines addressing infant and child health. Costing for Vitamin A Supplementation is incorporated in the nutrition budgets of the different levels of the health system.
5. What interventions are being **implemented effectively**, what aren't?	While Vitamin A Supplementation in children Under 5 has been integrated into the child health services provided at health facilities (ANC, PHC, CHC, hospitals), coverage for children between the ages of 1 and 5 still remains relatively low at 42%. The main inhibiting factor in the uptake of this intervention appears to be the fact that mothers tend not to bring young children to health facilities unless they are sick.
6. **Why** are some interventions not being implemented effectively and efficiently, and what is needed to strengthen, upscale, and sustain them? Sub-questions include:	See answer to question 5.
7. How far is nutrition **mainstreamed** into the work of relevant services which impact directly on children? .	Vitamin A Supplementation is mainstreamed into the day-to-day work of the nurse in health facilities.
8. Are there appropriate **plans** to implement these nutrition interventions, are they included in departmental strategic plans, APPs and operational plans?	Vitamin A Supplementation is integrated into the plans for services provided at facility level to children under 5. There is no separate APP or operational plan for Vitamin A Supplementation separate from those for the health department.
9. Is there appropriate **leadership** for nutrition at the respective levels and are they empowered to play that role?	Vitamin A Supplementation is integrated into the leadership structure governing all health and nutrition services. There are no separate leaders for the intervention.
10. Are there **relevant workers** (not necessarily professional dieticians or nutritionists) to address nutrition-related interventions?	Yes, both facility based health care workers as well as CHWs are able to deliver Vitamin A Supplementation None of the facilities visited reported staff shortages as affecting the delivery of this intervention.

<table>
<tr><th>Evaluation Question</th><th>Micronutrient including Vitamin A supplementation*</th></tr>
<tr><td>11. 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?</td><td>Knowledge regarding the benefits of Vitamin A Supplementation needs to improve among health workers as only about 50% were able to identify the benefits of the intervention with EC and FS health care workers the least able to mention the benefits related to immunity at 29% and 17% respectively.
<table>
<tr><th></th><th>WC</th><th>EC</th><th>FS</th><th>KZN</th><th>All</th></tr>
<tr><td>prevents visual impairment (e.g. night blindness)</td><td>76%</td><td>19%</td><td>61%</td><td>75%</td><td>51%</td></tr>
<tr><td>lowers the risk of illness and mortality from measles</td><td>0%</td><td>2%</td><td>13%</td><td>83%</td><td>28%</td></tr>
<tr><td>lowers the risk of illness and mortality from diarrhoea</td><td>12%</td><td>0%</td><td>17%</td><td>80%</td><td>29%</td></tr>
<tr><td>lowers the risk of illness and mortality from acute respiratory infections</td><td>12%</td><td>4%</td><td>9%</td><td>63%</td><td>23%</td></tr>
<tr><td>increases immunity</td><td>59%</td><td>29%</td><td>17%</td><td>85%</td><td>48%</td></tr>
</table></td></tr>
<tr><td>12. Do the PHC and other service facilities have the necessary equipment, guidelines, protocols, and supplies to deal with nutrition in under-five children?</td><td>Stock of 100,000IU was available in 88% of the facilities visited while 94% of facilities had the 200,000IU.

Only 74% of health facilities had Road to Health cards, and 50% experienced stockouts in the previous 6 months. .</td></tr>
<tr><td>13. Do service standards/norms exist for relevant interventions?</td><td>Health facilities follow the Vitamin A Protocol specified in the various guidelines listed in the answer to Question 1 including:
• Standard Treatment Guidelines and Essential Medicines List for South Africa (PHC Level), 2008
• IMCI Guidelines, etc.

No provincial adaptations have occurred.</td></tr>
<tr><td>14. Are resources allocated appropriately and sufficiently (this would draw on international evidence of cost-benefits)?</td><td>Staffing and supplies do not appear to be a major issue in the delivery of Vitamin A Supplementation – particularly as CHWs are now able to administer Vitamin A Supplementation.</td></tr>
<tr><td>15. 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 (e.g. community-based services such as nutrition advisors, and platforms for community involvement)? How extensive are these?

How are children accessed at community level? Are the newly deployed community health workers (under PHC re-engineering) engaged in nutrition services delivery?</td><td>Now that CHWs are able to administer Vitamin A Supplementation, the PHC re-engineering currently underway is expected to extend the reach of this intervention into the communities and increase the coverage for children between 1 and 5 years of age. However, we weren't able to determine the extent to which the newly deployed CHWs are already engaged in Vitamin A Supplementation, as all data on government services was collected in health facilities and management levels.</td></tr>
</table>

Evaluation Question	Micronutrient including Vitamin A supplementation*
16. 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?	Within DOH services, Vitamin A Supplementation is part of post-natal and child health services. Vitamin A Supplementation is mainly delivered through the health department at health facilities and through CHWs. In an attempt to reach children between the ages of 1 and 5, ECDs are increasingly being targeted (especially during campaigns). No formal inter-governmental arrangements are in place with regards to this intervention.
17. What **monitoring and evaluation systems** are in place and needed to monitor and improve the evidence base for and implementation of nutrition-related interventions?	There is one (1) direct indicator in the DHIS which captures the delivery of Vitamin A Supplementation: *"Percentage of children age 1 to 5 years who receive at least one dose of Vitamin A per year."* However, as children are supposed to be supplemented twice a year (every six months) until the age of 5 in order to get the full benefit of this intervention, the indicator above is not sufficient on its own. In fact, given the reality of poor utilization of routine health services by mothers of young children, one would expect the percentage of children 1 to 5 years of age who have received the recommended two doses of Vitamin A per year to be much less than the indicator above would suggest.

16. Nutrition Education and Counseling

Nutrition education and counselling seek to improve nutrition practices before and during pregnancy to improve maternal nutrition and reduce the risk of poor health outcomes in both mothers and their children. Nutrition education and counselling focus on enhancing the quality of the diet, by educating women on which foods and what quantities they need to consume in order to achieve optimal dietary intake. This can also include counselling on the use of micronutrient supplements recommended during pregnancy, such as multiple micronutrient supplements containing iron and folic acid. Nutrition education and counselling can be provided as part of a comprehensive package of health education including components such as smoking cessation and the dangers of alcohol and drug use and can be delivered via a number of channels including home visits and health facility visits.

WHO indicates that nutrition education and counselling shows greatest benefit in low and middle-income countries when provided in conjunction with nutrition support[25]. Strong evidence also suggests that nutrition training of health workers improves energy intake, feeding frequency, and dietary diversity of children between six months and two years of age[26].

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.

Evaluation Question	Nutrition Education and Counseling
1. 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? Are there policy gaps? *Are food and nutrition policies sensitive to needs of children Under 5?* *Are food and nutrition policies funded?*	No separate policies exist that govern Nutrition Education and Counselling, but many health guidelines refer to its importance. Nutrition education and counselling as it relates to pregnant women and young children is integrated into the following services: • BANC; • Maternity; • post-natal care and child health services; and • PMTCT services, sometimes with follow-up support at home by CHWs or NGOs/CBOs Funding for these is integrated into the DOA budget.
2. 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?	Not Applicable.

[25] Darnton-Hill, Ian. Nutrition counselling during pregnancy. Biological, behavioural and contextual rationale. WHO e-Library of Evidence for Nutrition Actions (eLENA). July 2013. http://www.who.int/elena/bbc/nutrition_counselling_pregnancy/en/

[26] Sunguya, Bruno F, KC Poudel, LB Mlunde, P Shakya, DP Urassa, M Jimba, J Yasuoka. *Effectiveness of nutrition training of health workers toward improving caregivers' feeding practices for children aged six months to two years: a systematic review. Nutrition Journal* **12**:66. 2013. doi:10.1186/1475-2891-12-66. http://www.nutritionj.com/content/12/1/66

Evaluation Question	Nutrition Education and Counseling
3. 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?	Counselling on exclusive breastfeeding has been confusing especially for HIV positive mothers who had been given infant formula as part of the country's PMTCT programme There is conflicting and competing information on how to best feed infants and young children, which also comes from family beliefs, community practices, and health workers, as well as advertising and commercial promotion by food manufacturers
4. Are **high impact interventions** being prioritised in practice? *Are high impact interventions budgeted for in provincial Annual Performance Plans (APPs) and district health plans?*	Not Applicable.
5. What interventions are being **implemented effectively**, what aren't?	Nutrition counselling is implemented however not effectively. Only 36% of respondents in facilities mentioned counselling without prompting Nutrition counselling is done continuously during under 5 and ANC consultation Pregnant women are educated on nutrition and healthy food during ANC Health talks that are conducted include nutrition education Factors that inhibit effective implementation: • It takes a while for people to change their dietary habits • Health workers need counselling skills, • Health workers need communication skills, • Health workers need access to accurate information to ensure that they provide clear information on nutrition to mothers • Lack of space for counselling in facilities • Transport is the main barrier because villages that are far are not accessible to CHW • Means of communication is a barrier in terms of following up; cannot call clients and follow up There are no CHWs for the deep rural areas
6. **Why** are some interventions not being implemented effectively and efficiently, and what is needed to strengthen, upscale, and sustain them? Sub-questions include:	Staff shortages have contributed to poor nutrition counselling as is evidenced by poor communication to beneficiaries about the exit criteria and related confusion and dissatisfaction on the part of the beneficiaries. Health facilities need more staff and nutrition counsellors.
7. How far is nutrition **mainstreamed** into the work of relevant services which impact directly on children? .	Nutrition education is mainstreamed into the day-to-day work of the health workers.
8. Are there appropriate **plans** to implement these nutrition interventions, are they included in departmental strategic plans, APPs and operational plans?	Nutrition Education and Counselling is integrated into the plans for health services. There is no separate APP or operational plan for Nutrition Counselling and Education separate from those for the implementing department.

Evaluation Question	Nutrition Education and Counseling
9. Is there appropriate **leadership** for nutrition at the respective levels and are they empowered to play that role?	Nutrition Education and Counselling is integrated into the leadership structure governing all DOH nutrition services. There are no separate leaders for Nutrition Education and Counselling.
10. Are there **relevant workers** (not necessarily professional dieticians or nutritionists) to address nutrition-related interventions?	There is a need for more dieticians and nutrition personnel given nurses' high workloads, as they end up conducting rushed /no nutrition counselling.
11. 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?	Staff lack skills and it limits their ability to address the needs at scale. Of the health workers interviewed about 40% mentioned Vitamin A for a child who is not growing well and only 50% mentioned the importance of exclusive breastfeeding if the child is less than 6 months of age.
12. Do the PHC and other service facilities have the necessary equipment, guidelines, protocols, and supplies to deal with nutrition in under-five children?	89% of the facilities had functioning baby weighing scales (specify type or make). 92% had length measuring boards (specify type or make). 72% had MUAC (mid-upper arm circumference) tapes. Many health facilities reported that they did not have enough space for counselling mothers; 56% of the facilities had enough space for counselling mothers. An average of 83% of the facilities had guidelines and protocols. An average of 53% of the health facilities had IC materials.
13. Do service standards/norms exist for relevant interventions?	Policy level documents guide the implementation of the intervention and very few appear to guide operations at community level.
14. Are resources allocated appropriately and sufficiently (this would draw on international evidence of cost-benefits)?	Many respondents at health facility level (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.
15. 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 (e.g. community-based services such as nutrition advisors, and platforms for community involvement)? How extensive are these? *How are children accessed at community level? Are the newly deployed community health workers (under PHC re-engineering) engaged in nutrition services delivery?*	There are appropriate systems and structures (e.g. CHWs NGOs, CBOs) which provide nutrition counselling and education in communities. CHWs conduct home visits and provide counselling to mothers while monitoring child nutrition.
16. 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?	Nutrition Education and Counselling is part of the health services provided by the DOH. There is no evidence of DOH working with other government departments in providing and promoting nutrition education and counselling.

Evaluation Question	Nutrition Education and Counseling
17. What **monitoring and evaluation systems** are in place and needed to monitor and improve the evidence base for and implementation of nutrition-related interventions?	Lack of data hampers NDOH ability to know the extent to which it is being implemented, and whether it is being implemented effectively. There are concerns about the quality of nutrition counselling and the knowledge and skills of those delivering the intervention.

17. ORS and Zinc

Diarrhoea is the leading cause of death among infants and young children in low- and middle-income countries. There are two simple and effective treatments for the clinical management of acute diarrhoea[27]: (i) use of low concentration oral rehydration salts (ORS) and (ii) routine use of zinc supplementation which has been found to reduce the duration and severity of diarrhoeal episodes and the likelihood of subsequent infections.

In South Africa, both ORS and Zinc are supposed to be given to children during diarrhoeal episodes.

Evaluation Question	ORS and Zinc
1. 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? Are there policy gaps? *Are food and nutrition policies sensitive to needs of children Under 5?* *Are food and nutrition policies funded?*	There appear to be no stand-alone policies or guidelines governing the use of ORS and Zinc in the management of diarrhoeal diseases. Instead, these are included in several guidelines which address key interventions to be delivered to children under 5 years of age – mostly at the Primary Health Care Level: Some of these include: • the Strategic Plan for Maternal, Newborn, Child and Women's Health (MNCWH) and Nutrition (2012-2016) (Zinc) • IMCI guidelines (ORS and Zinc) • Standard Treatment Guidelines and Essential Medicines List for South Africa (PHC Level), 2008 (ORS and Zinc) • the Guidelines for Management of Moderate and Severe Malnutrition (ORS) • Circular Minute No. 1 of 2013 – Provision of Zinc to all Children Under Five Years of Age with Diarrhoea • Circular Minute No. 3 of 2013 – Roles and Responsibilities of Different Cadres to Reduce Diarrhoeal Diseases in Health Districts • Road to Health Booklets (ORS). These guidelines are sensitive to the needs of children U5. Funding for the management of diarrhoea with ORS and Zinc is integrated into the DOH budget.
2. 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?	Not Applicable.

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<table>
<tr><th>Evaluation Question</th><th>ORS and Zinc</th></tr>
<tr><td>3. 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?</td><td>While the use of ORS in the management of diarrhoeal diseases has been integrated into the recommended practices of health care workers for a long time, zinc supplementation is relatively new. Almost all guidelines include ORS as a recommended intervention for the management of diarrhoeal diseases while not all have been updated to include zinc supplementation.

Most mothers tend to visit health facilities when their children are sick. As a result, children with diarrhoea are brought to health facilities for treatment.

There is evidence of the use of ORS at the community level, both through governmental structures and other community-based structures NGO/CBOs.</td></tr>
<tr><td>4. Are high impact interventions being prioritised in practice?

Are high impact interventions budgeted for in provincial Annual Performance Plans (APPs) and district health plans?</td><td>The management of diarrhoeal diseases using ORS and Zinc supplementation is prioritized and is featured in key strategies and guidelines addressing infant and child health. Costing for the management of diarrhoeal diseases is incorporated in the nutrition budgets of the different levels of the health system.</td></tr>
<tr><td>5. What interventions are being implemented effectively, what aren't?</td><td>The use of ORS in the management of diarrhoeal diseases has been in place longer than that of Zinc supplementation. However, updated versions of relevant guidelines have incorporated zinc supplementation alongside ORS.

All facilities visited were aware of the use of ORS in the management of diarrhoea and most reported having a dedicated ORS corner (in a few facilities lack of space and/or construction were cited as reasons for not having this dedicated space).

At the facility level, the message regarding Zinc supplementation in cases of diarrhoea is increasingly getting through. However, there are wide variations in the knowledge levels among provinces with health workers in 75% of KZN health facilities able to identify why Zinc should be given to children while only 2% of EC health care workers could say why.

<table><tr><th></th><th>Why should zinc be given to children?</th></tr><tr><td>WC</td><td>59%</td></tr><tr><td>EC</td><td>2%</td></tr><tr><td>FS</td><td>65%</td></tr><tr><td>KZN</td><td>75%</td></tr></table></td></tr>
<tr><td>6. Why are some interventions not being implemented effectively and efficiently, and what is needed to strengthen, upscale, and sustain them? Sub-questions include:</td><td>Some inhibiting factors in the use of ORS and Zinc supplementation in the management of diarrhoeal diseases in children under 5 are:
Insufficient supplies of ORS and Zinc tablets (see response to Question 12
Insufficient knowledge/understanding regarding the rationale behind the use of Zinc supplementation in diarrhoeal cases
Insufficient space to set up an ORS corner according to the protocol</td></tr>
<tr><td>7. How far is nutrition mainstreamed into the work of relevant services which impact directly on children? .</td><td>The use of ORS and Zinc supplementation in the management of diarrhoeal diseases is mainstreamed into the day-to-day work of the nurse in health facilities.</td></tr>
</table>

Evaluation Question	ORS and Zinc
8. Are there appropriate **plans** to implement these nutrition interventions, are they included in departmental strategic plans, APPs and operational plans?	The management of diarrhoeal diseases using ORS and Zinc supplementation is integrated into the plans for services provided at facility level to children under 5. There is no separate APP or operational plan for this intervention apart from those for the health department.
9. Is there appropriate **leadership** for nutrition at the respective levels and are they empowered to play that role?	The management of diarrhoeal diseases using ORS and Zinc supplementation is integrated into the leadership structure governing all health and nutrition services for children under 5. There are no separate leaders for the intervention.
10. Are there **relevant workers** (not necessarily professional dieticians or nutritionists) to address nutrition-related interventions?	Yes, nurses at the facilities are trained in the management of diarrhoeal diseases in children using ORS and, Zinc supplementation – as part of their IMCI training (although knowledge levels regarding Zinc supplementation need to be increased). The intervention is fully integrated into the normal duties of the health care workers. None of the facilities visited reported staff shortages as affecting the delivery of this intervention.
11. 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?	While knowledge regarding the use of ORS in cases of diarrhoea seems to be widespread, the use of Zinc supplementation in the management of diarrhoea appears to not be as well understood – particularly in EC – with only 2% of health facility respondents able to state why Zinc should be given to children.
12. Do the PHC and other service facilities have the necessary equipment, guidelines, protocols, and supplies to deal with nutrition in under-five children?	Stock out of ORS and/or Zinc tablets was reported across the four provinces. Among the health facilities visited, 26% did not have ORS available on the day of the visit while 38% were out of Zinc supplements. The stock out of supplies, however, was not uniform across the provinces. For example: • Zinc tablets: None (0%) of the health facilities visited in the EC had Zinc tablets while all the health facilities in WC (100%) had enough stock. • ORS: The differences in the stockout levels across provinces were not as stark with the following percentages of facilities reporting stockout as follows: 40% in the EC, 30% in WC, 29% in FS and only 11% in KZN.
13. Do service standards/norms exist for relevant interventions?	Health facilities follow the protocol governing the management of diarrhoeal diseases as outlined in the guidelines listed in response to Question 1 above including: • Standard Treatment Guidelines and Essential Medicines List for South Africa (PHC Level), 2008 • IMCI Guidelines, etc. Several cases of adaptation of the IMCI guidelines were found at the provincial level but the core protocol appears to be the same as that set forth in the national guidelines.
14. Are resources allocated appropriately and sufficiently (this would draw on international evidence of cost-benefits)?	While staffing does not appear to be an issue in the management of diarrhoea using ORS and Zinc supplementation, skill/knowledge levels (see answer to Question 5 with regards to Zinc supplementation) and supplies (with regards to both ORS and Zinc tablets) appear to be issues. (See response to Question 12 above).

Evaluation Question	ORS and Zinc
15. 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 (e.g. community-based services such as nutrition advisors, and platforms for community involvement)? How extensive are these? *How are children accessed at community level? Are the newly deployed community health workers (under PHC re-engineering) engaged in nutrition services delivery?*	The management of diarrhoea using ORS and Zinc supplementation is an intervention which is not limited to health facilities. Although the PHC re-engineering currently underway is capable of extending the reach of this intervention into the communities, we were not able to determine the extent to which the newly deployed CHWs are already engaged in this intervention due to the fact that all data on government services was collected in health facilities and management levels.
16. 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?	Management of diarrhoeal diseases using ORS and Zinc Supplementation is an integral part of DOH facility based services.
17. What **monitoring and evaluation systems** are in place and needed to monitor and improve the evidence base for and implementation of nutrition-related interventions?	There is one direct indicator in the DHIS which monitors prevention of diarrhoea with dehydration (IMCI classification) in children under 5 years. *"Child under 5 years diarrhoea with dehydration incidence (annualised)" – defined as: Children under 5 years newly diagnosed with diarrhoea with dehydration per 1,000 children under 5 years in the population.* The episode is counted only once when diagnosed. Follow-up visits for the same episode of diarrhoea are not supposed to be counted again.

18. Targeted Supplementary Feeding

Targeted Supplementary Feeding (TSF) is an intervention to treat moderate malnutrition in South Africa. WHO states that the dietary management of moderate malnutrition in pregnant women and young children should normally be based on the optimal use of locally available nutrient-dense foods. In situations of food shortage, or where some nutrients are not sufficiently available through local foods, specially formulated supplementary foods will be required to supplement the regular diet. Management of moderate malnutrition in children 6–59 months of age should also include breastfeeding promotion and support, education and nutrition counselling for families, and other activities that identify and prevent the underlying causes of malnutrition.

In South Africa, Targeted Supplementary Feeding 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.

Evaluation Question	Targeted Supplementary Feeding
1. 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? Are there policy gaps? *Are food and nutrition policies sensitive to needs of children Under 5?* *Are food and nutrition policies funded?*	Yes. The main policy governing this intervention is the South African Supplementary Feeding Guidelines for at Risk and Malnourished Children and Adults. Funding for this intervention is part of the overall nutrition as well as the "goods and services" component of provincial budgets. The current policy focuses on the clinical implementation of this intervention. However, there is scope to expand it to include community based implementation. The policy is sensitive to the needs of children Under 5.
2. 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?	Not applicable.
3. 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?	Targeted Supplementary Feeding, as currently practised, is a clinical intervention mainly delivered through health facilities. However, because growth monitoring serves as the main entry point for the TSF programme, the low coverage of growth monitoring coupled with poor quality of plotting and interpreting weights by health workers possibly leads to an under-enrolment in the programme or a delay in treatment until the child becomes severely malnourished. Encouragingly, although not widespread, there is an Increasing use of community based structures (e.g. CHWs / CCGS) for growth monitoring and promotion activities which will likely lead to timely identification and referral of cases in need of this intervention.

Evaluation Question	Targeted Supplementary Feeding
4. Are **high impact interventions** being prioritised? *Are high impact interventions budgeted for in provincial Annual Performance Plans (APPs) and district health plans?*	Targeted Supplementary Feeding appears to be prioritised. The majority of health facilities visited (92%) had available stock of the nutrition supplements on the day of the visit. However, stock outs is a challenge with over 40% of the facilities reporting having experienced some stock outs in the previous six months. The budget for this intervention is part of the Nutrition and "Goods and Services" line items.
5. What interventions are being **implemented effectively**, what aren't?	TSF is not being implemented as effectively as it could be.
6. **Why** are some interventions not being implemented effectively and efficiently, and what is needed to strengthen, upscale, and sustain them? Sub-questions include:	The implementation of TSF is affected by issues surrounding the effective implementation of GMP and nutrition counselling. The low coverage of GMP as well as issues with the poor quality of plotting and interpreting measurements affects the timely enrolment into the TSF program. In addition, shortage of staff and poor training affects the nutrition counselling which is an integral part of an effective TSF program. Also affecting the effective implementation of this intervention is the issue of stock outs.
7. How far is nutrition **mainstreamed** into the work of relevant services which impact directly on children? .	TSF is mainstreamed into the regular duties of nurses at health facilities.
8. Are there appropriate **plans** to implement these nutrition interventions, are they included in departmental strategic plans, APPs and operational plans?	TSF is integrated into the plans for services provided at the health facility level for children Under 5. There are no separate departmental strategic plans, APPs and operational plans.
9. Is there appropriate **leadership** for nutrition at the respective levels and are they empowered to play that role?	The leadership for TSF is integrated into the leadership structure for all health and nutrition services. There is no separate leadership structure for TSF.
10. Are there **relevant workers** (not necessarily professional dieticians or nutritionists) to address nutrition-related interventions?	TSF is implemented by appropriately trained nurses at health facilities. However, staff shortages has contributed to poor nutrition counselling – an important component of the intervention – while poor training of health workers involved in GMP has possibly led to an under enrolment in the TSF program due to poor plotting and interpretation of measurements.
11. 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?	Lack of skills in proper plotting and interpretation of growth monitoring measurements as well as nutrition counselling affects the effective implementation of TSF.
12. Do the PHC and other service facilities have the necessary equipment, guidelines, protocols, and supplies to deal with nutrition in under-five children?	Most of the health facilities visited had functioning baby and adult weighing scales as well as MUAC tapes. However, over 25% of facilities did not have length boards and a similar number did not have Road to Health cards.
13. Do service standards/norms exist for relevant interventions?	Yes. The service standards /norms that guide this intervention are spelled out in the *IMCI guidelines*, the *Guidelines for Nutrition Interventions at Health Facilities to Manage and Prevent Child Malnutrition* as well as *The South African Supplementary Feeding Guidelines for at Risk and Malnourished Children and Adults*.

Evaluation Question	Targeted Supplementary Feeding
14. Are resources allocated appropriately and sufficiently (this would draw on international evidence of cost-benefits)?	The main resource limitation surrounding TSF is that of shortage of skilled staff especially vis-à-vis its effect on the effective delivery of GMP and nutrition counselling. When shortage of financial resources was mentioned as a constraint it was in the context of not being able to hire more staff.
15. 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 (e.g. community-based services such as nutrition advisors, and platforms for community involvement)? How extensive are these? *How are children accessed at community level? Are the newly deployed community health workers (under PHC re-engineering) engaged in nutrition services delivery?*	As currently practiced, TSF is primarily a clinical intervention delivered through health facilities. However, given that GMP is the main entry point into this programme, the absence of a strong, community-based GMP program limits the enrolment into this program as well as the regular follow-up visits that are meant to be an integral part of the programme. With the introduction of the Ward-level PHC teams under the PHC re-engineering, there is an expectation that the coverage of GMP will significantly increase.
16. 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?	TSF is mainstreamed into the regular health services delivered at the facility level. However, there is very little linkage and/or referrals with the nutrition services of other departments. The exception to this appears to be KZN where Ward-level anti-poverty committees discuss food-insecure households and refer malnourished individuals to health care facilities.
17. What **monitoring and evaluation systems** are in place and needed to monitor and improve the evidence base for and implementation of nutrition-related interventions?	Health facilities have malnutrition registers to record all those being provided with TSF and the dates for programme entry and exit. Monthly reports are prepared by facilities and submitted to the districts who in turn submit quarterly reports to provincial DOH. Furthermore, there is an indicator in the DHIS which related directly to this intervention – the number of undernourished children under 5 years of age receiving therapeutic supplements. However, the recording of cases in the malnutrition registers is not consistent leading to under-reporting as well as difficulty determining how long individuals have been enrolled in the program. Furthermore, the indicator reported on does not distinguish between newly enrolled patients and those who've been receiving the intervention on an ongoing basis.

Annex 4: Other Policy Options for Restricted Marketing of Unhealthy Foods to Children

As in other countries, the growth of ‘‘Big Food’’ In South Africa is implicated in unhealthy eating[61]. Big Food in South Africa involves both South African companies and international food companies generally headquartered in North America and Europe. These companies have developed commercial strategies to increase the availability, affordability, and acceptability of their foods, while at the same time promoting a range of ‘‘health and wellness’’ initiatives. Their influence on food and nutrition messages and behaviour is significant in South Africa, as their intensive advertising often sways consumer perceptions about nutrition more than the government’s messages, especially in urban areas.

Given rising obesity and poor quality of diets consumed in South Africa among children and adults alike, it is especially important for the government to embark on creative public policy around the marketing of unhealthy food items. Table 16 presents some additional policy options that might be considered to restrict the marketing of unhealthy foods specifically to children.

Table 16. Policy Options to Restrict Marketing of Unhealthy Foods to Children[62]

Location	Policy Options
Supermarkets, convenience stores, and other retail outlets	• Impose excise taxes or fees on sugar-sweetened beverages, and earmark a portion or all of the revenue to fund obesity prevention programmes. • Require "healthy checkout aisles," free of obesogenic food and beverages. • Prohibit food sales in nonretail food outlets (e.g. sporting goods stores, toy stores). • Limit sales of obesogenic food and beverages near schools before, during, and immediately after the school day. • Regulate the pricing of obesogenic food and beverages (e.g. set minimum prices). • Limit the total amount of store window space that can be covered by signs. To avoid potential Freedom of Speech violations, the policy should apply to all signs no matter the message and should be based on non–speech-related considerations such as minimising visual clutter. • Require food retailers to obtain a license that comes with conditions limiting in some way the sale of obesogenic food and beverages.
Restaurants and other food service establishments	• Set nutrition standards for children's meals that include a toy or other incentive item. • Enact a menu labelling law that is identical to the federal law (thus enabling local enforcement) and/or that applies to food service establishments that are not covered under the federal law. • Prohibit new fast-food restaurants from opening near schools. • Restrict the number or density of fast-food restaurants. • Ban drive-through windows. • Prohibit use of trans-fats in restaurant food. • Set procurement standards for government-run food facilities. • Implement a healthy restaurant certification programme that encourages restaurants to reduce the sale and advertising of obesogenic food and beverages to children.

Location	Policy Options
Schools	• Ban the sale of obesogenic food and beverages on school property. • Ban all food advertising on school property or ban advertising on school property for foods that are not allowed to be sold on campus. • Include provisions in vending contracts limiting the sale and advertising of obesogenic food and beverages on school property. • Prohibit fundraisers that entail selling obesogenic food and beverages. • Implement closed campus policies to reduce student exposure to obesogenic food marketing.
Elsewhere in the community	• Ban all commercial billboards except those located on the site of the advertised establishment. To avoid potential First Amendment violations, the ban should be based on non–speech-related considerations such as traffic safety or aesthetics. • Include provisions in vending contracts limiting the sale and advertising of obesogenic food and beverages in parks and other public venues that are frequented by children.

Annex 5: Evaluation Team

Name	Role
Mary Pat Selvaggio	Team Leader and Nutrition Specialist
Edna Berhane	Nutrition Specialist, Researcher
Enoch Peprah	Budget and Policy Specialist, Researcher
Elna Hirschfeld	Researcher, Governance Specialist
Joy Summerton	Researcher – Literature Review and Intervention Case Study Analysis
Boitumelo Molongoana	Senior Researcher – Free State
Zandile Wanda-Mthembu	Senior Researcher – Kwazulu-Natal
Joyce L Jakavula	Senior Researcher – Western Cape
Bongani Manzini	Researcher – Eastern Cape
Nadia Assimacopoulos	Researcher and Technical Support
Samantha Dube	Technical support
Margaret Zwane	Logistics Support

Data collection was undertaken by the following individuals:

- Mary Pat Selvaggio, National Level Interviews and Literature Review
- Edna Berhane, National Level Interviews and Literature Review
- Elna Hirschfeld, National Level Interviews
- Enoch Peprah, National Level Interviews
- Nadia Assimacopoulos, National Level Interview
- Zandile Wanda, KZN Data Collection
- Bongani Manzini, EC Data Collection
- Boitumelo Molongoana, FS Data Collection
- Joyce L Jakavula, WC Data Collection

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