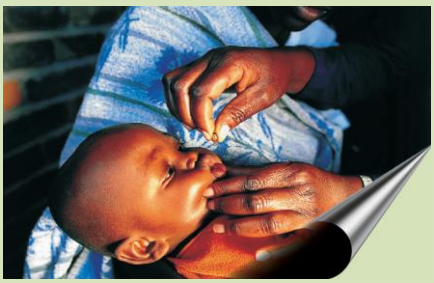
Infant and Young Child Feeding Policy



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South African Infant and Young Child Feeding Policy 2013

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Prepared and obtainable free of charge from:

Directorate Nutrition
National Department of Health
Private Bag X828
Pretoria
0001

Tel: (012) 395-8782
Fax: (012) 395-8802

Department of Health – 2013
ISBN: 978-1-920031-74-9
www.doh.gov.za

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Foreword

It is with great pleasure that I present this revised Policy for the protection, promotion and support of appropriate infant and young child feeding in South Africa. Optimal infant and young child feeding (IYCF) is essential for child growth and development. The period during pregnancy and a child's first two years of life also referred to as the *"first 1000 days of life"* are considered a *"critical window of opportunity"* for prevention of growth faltering.

The policy is in furtherance of Article 28(2) of the Constitution which states*, "A child's best interests are of paramount importance in every matter concerning the child".*

It also fulfils government's obligations under Article 24 of the Convention on the Rights of the Child to ensure that parents and children are informed and supported with knowledge of child health and nutrition. This includes the critical role of breastfeeding in child survival, nutrition and development.

Our commitment is further demonstrated in the Negotiated Service Delivery Agreement (NSDA) for health, which identifies reduction in maternal and child mortality as key strategic outputs for the health sector[1]. Reduction of child mortality can only be maximised when infant and young child feeding are prioritised in national policies and strategies.

In light of these commitments, a National Breastfeeding Consultative Meeting was held in August 2011 in which South Africa declared to actively promote, protect and support exclusive breastfeeding as a public health intervention to optimise child survival, and we committed ourselves to take actions to demonstrate this.

This was followed by a launch of the Campaign on Accelerated Reduction of Maternal and Child Mortality in South Africa (CARMMA) in May 2012 to ensure co-ordinated efforts and effective implementation of existing plans and strategies through positive messaging with special focus on intensifying actions aimed at reducing maternal, newborn and child mortality.

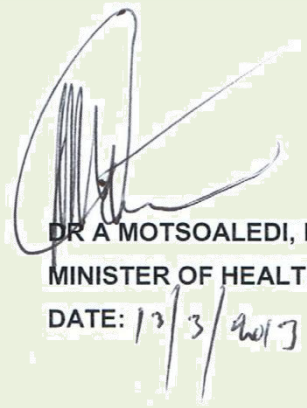
[1] National Department of Health, Health Sector Negotiated Service Delivery Agreement (NSDA) 2011.

Among the key CARMMA strategies are improving child survival through promotion of breastfeeding, appropriate care and support of pregnant women and lactating mothers in the work place, the establishment of maternity waiting homes; facilities for lactating mothers; and Kangaroo Mother Care (KMC).

Promotion of breastfeeding should be viewed in a broader context recognising its role in later reduction of Non-Communicable Diseases (NCDs). The community health workers within the Primary Health Care re-engineering process will play a significant role in supporting mothers to exclusive breastfeed and continue breastfeeding.

This Policy comes at a time when the world is celebrating 10 years of the Global Strategy for Infant and Young Child Feeding. It is with renewed vigour that South Africa now takes up this challenge to protect, promote and support breastfeeding. This revised IYCF policy is the first step towards aligning child health policies and programmes to this call for action.

I call upon all stakeholders to implement this policy that will contribute to improvement of the nutritional status, growth and development of infants and young children in South Africa.



DR A MOTSOALEDI, MP
MINISTER OF HEALTH
DATE: 13/3/2017

Acknowledgements

We would like to express our appreciation to all who contributed to the revised Infant and Young Child Feeding Policy. The collective contribution of individuals and organisations both within and outside the Department of Health will go a long way to improve infant and young child health in South Africa.

Recognition goes to Ms L Moeng (Director of Nutrition) and Ms A Behr, who contributed to co-ordinate and finalise the policy.

The following organisations and persons are acknowledged for their technical contributions and comments during the revision the Policy:
UNICEF (Ms C Witten & Ms R Pickel); Medical Research Council (Dr T Doherty); University of KwaZulu-Natal (Prof A Coutsoudis); Umgungundlovu Health District: (Dr S Kauchali), NDOH, Directorate: Child and Youth Health (Dr L Bamford) and Directorate: Oral Health (Ms E Kgabo).

We also appreciate the comments and input received from a range of representatives of Tertiary Training Institutions, Health Facilities, Provincial Nutrition Units and the National Directorate: Nutrition.

MS M P MATSOSO
DIRECTOR-GENERAL: HEALTH
DATE: 11/3/2013

Abbreviations and Acronyms

AFASS	Affordable, Feasible, Accessible, Safe and Sustainable
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
ARV	Antiretroviral
BANC	Basic Antenatal Care
BFHI	Baby Friendly Hospital Initiative
CARMMA	Campaign on Accelerated Reduction of Maternal and Child Mortality in Africa
CCMTS	Comprehensive HIV and Aids Care, Management, Treatment and Support
DHIS	District Health Information System
DOTS	Directly Observed Treatment Short-course for TB
EBF	Exclusive Breastfeeding
ECD	Early Childhood Development
EPI	Expanded Programme on Immunisation
HIV	Human Immunodeficiency Virus
IMCI	Integrated Management of Childhood Illness
INP	Integrated Nutrition Programme
KMC	Kangaroo Mother Care
LBW	Low Birth Weight
MDG	Millennium Development Goal
MNCWH	Maternal, Newborn, Child and Women's Health
MTCT	Mother-to-child transmission of HIV
MBFI	Mother-Baby Friendly Initiative
MRC	Medical Research Council
NCDs	Non-communicable diseases
NDOH	National Department of Health
NFCS	National Food Consumption Survey
NFCS-FB	National Food Consumption Survey- Fortification Baseline
NSDA	Negotiated Service Delivery Agreement
PHC	Primary Health Care
PMTCT	Prevention of Mother-to-Child Transmission (of HIV)
RtHB	Road to Health Booklet
SADHS	South Africa Demographic and Health Survey
SAVACG	South African Vitamin A Consultative Group
STI's	Sexually Transmitted Infections
TB	Tuberculosis
UN	United Nation
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNICEF	United Nations Children's Fund
WHA	World Health Assembly
WHO	World Health Organisation

1 INTRODUCTION

Optimal nutrition during infancy and childhood is critical to ensuring optimal child health, growth and development. Globally under-nutrition is a leading cause of childhood morbidity and mortality. The 2005 Innocenti Declaration on Infant and Young Child Feeding recognises that inappropriate infant and young child feeding practices; sub-optimal or no breastfeeding and inadequate complementary feeding, are significant threats to child health.[2]

Breastfeeding rates in South Africa, and especially exclusive breastfeeding, remain very low.[3] Obstacles to exclusive and continued breastfeeding include the perception of insufficient milk, compounded by fears of HIV transmission, marketing of breastmilk substitutes, misinformation, breastfeeding problems, returning to full time employment without supportive structures and lack of guidance and encouragement from health care personnel among other factors.[4,5]

Studies have shown that infant and young child feeding is enhanced when women receive skilled support from health care personnel during antenatal, intra-partum, postnatal and follow-up care.[6,7] It is therefore imperative that health care personnel receive up to date evidence based knowledge and skills on appropriate infant and young child feeding practices so that they can provide quality counselling and adequate support to mothers and caregivers. Reduction of child mortality can be achieved only when infant and young child feeding are prioritised in national policies and strategies.[8]

1.1 Background

Since 2000, South Africa has engaged in various processes to discuss infant feeding in the context of HIV. These consultations intensified from 2001 with the advent of the national PMTCT programme. At the time, the national PMTCT programme provided free infant formula

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2 Innocenti Declaration on Infant and Young Child Feeding. 22 November 2005, Florence, Italy.
3 Annexure 2: Research evidence and situation analysis.
4 WHO, International Code of Marketing of Breastmilk Substitutes, 1981.
5 NDOH. Review of the implementation of the Baby Friendly Hospital Initiative in Public Maternity Units in South Africa, 2008.
6 WHO/UNICEF/UNAIDS. HIV and Infant Feeding Counselling: A training Course. Geneva, 2000.
7 WHO/UNICEF. Global Strategy for Infant and Young Child Feeding. World Health Organisation, Geneva, 2003.
8 UNICEF. Infant and Young Child Feeding. Programming Guide. May 2011. UNICEF: New York.

for a period of 6 months for HIV infected mothers who decided to replacement feed their infants.[9]

1.2 Context of the Policy

The release of the 2010 WHO guidelines on HIV and Infant feeding and the revised clinical guidelines for the prevention of mother-to-child transmission of HIV (PMTCT) by the Department of Health necessitated that the country reassess the position on infant feeding.[10,11] These guidelines brought renewed efforts to put breastfeeding back on the agenda as a key child survival strategy.

A National Breastfeeding Consultative Meeting was held in August 2011 in which South Africa declared to actively promote, protect and support exclusive breastfeeding as a public health intervention to optimise child survival. Stakeholders were called upon to take actions to demonstrate this commitment and strengthen efforts to promote breastfeeding. The Tshwane Declaration Resolutions are outlined in Annexure 4.[12]

At this meeting South Africa adopted the 2010 WHO guidelines on HIV and Infant Feeding, and recommended that given the current profile of infant and young child mortality in South Africa, health services would principally counsel and support mothers known to be HIV infected to exclusively breastfeed their infants for six months, continue breastfeeding for 12 months, with appropriate complementary feeding whilst taking antiretroviral treatment as prescribed. As per the Global Strategy for Infant and Young Child Feeding, HIV negative mothers should exclusively breastfeed their infants for six months with continued breastfeeding thereafter for up to two years and longer, with appropriate complementary feeding from six months of age.[13]

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[9] Doherty T, et al. An Evaluation of the Prevention of Mother to Child Transmission (PMTCT) of HIV Initiative in South Africa: Outcomes and key recommendations. 2003. Available at: http://www.hst.org.za.

[10] WHO (2010). Guidelines on HIV and Infant Feeding 2010. Principles and recommendations for infant feeding in the context of HIV and a summary of evidence. WHO, 2010.

[11] NDOH,South Africa National Department of Health. Clinical Guidelines: Prevention of Mother-to-Child Transmission (PMTCT) 2nd edition, 2010. Pretoria, South Africa.

[12] Annexure 4: NDOH, Tshwane Declaration of Support for Breastfeeding in South Africa. Aug 23-24, 2011. Tshwane, South Africa.

[13] WHO/UNICEF. Global Strategy for Infant and Young Child Feeding. World Health Organisation, Geneva, 2003.

As the 2007 national infant and young child feeding policy[14] based on the 2006 WHO recommendations,[15] is not in line with the 2010 WHO recommendations and the Tshwane Declaration commitments and is therefore no longer relevant. This policy therefore replaces the 2007 infant and young child feeding policy.

Following the Consultative Meeting in 2011, the National Department of Health issued a national policy directive phasing out the distribution of free infant formula as part of the PMTCT strategy.[16]

The policy is in line with numerous national policies, strategies and programmes as well as numerous global initiatives. These include the Convention on the Rights of the Child, which recognizes, in Article 24, the important role breastfeeding plays in the achievement of the child's right to the highest attainable standard of health. In addition, it is aligned with the Global Strategy for Infant and Young Child Feeding, the International Code of Marketing of Breastmilk Substitutes, the Innocenti Declaration, the Baby Friendly Hospital Initiative (renamed as the Mother-Baby Friendly Initiative), the UN Joint Guidelines on HIV and Infant Feeding 2010, the Campaign on Accelerated Reduction of Maternal and Child Mortality in Africa (CARMMA), Roadmap for Nutrition in South Africa and the Strategic Plan for Maternal, Newborn, Child and Women's Health (MNCWH) and Nutrition.[17]

2 POLICY FRAMEWORK

The policy statements reflect the most recent available scientific knowledge and programmatic experience.[18]

The statements define evidence-based best practice actions that should be taken by national, provincial and district managers, health facilities 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.

[14] NDOH. Infant and Young Child Feeding Policy, 2007. Department of Health: Pretoria.
[15] WHO. HIV and infant feeding technical consultation Oct 25-27, 2006. Geneva: WHO, 2006.
[16] See Annexure 5: Department of Health. Policy Directive for the Implementation of the Declaration on support of exclusive breastfeeding and revised guidelines on IYCF 2011. Pretoria, South Africa.
[17] See Annexure 3: Global and national initiatives on infants and young child feeding.
[18] See Annexure 2: Research evidence and situation analysis.

2.1 Vision of the Policy

To promote optimal nutritional status, growth, development and improve health and child survival outcomes of infants and young children in South Africa.

2.2 Aim

The aim of the policy is to define strategies and actions that should be implemented to promote, support and protect appropriate infant and young child feeding practices, including in the context of HIV.

2.3 Scope of the policy

This policy applies to different stages of the continuum of care for mothers, infants and young children, namely antenatal, intra-partum, postnatal and follow-up care and covers key components listed in Box 1 to be implemented in health facilities and facilities caring for mothers, infants and young children.

Box 1: Key components of the Infant and Young Child Feeding Policy

1. Early initiation of breastfeeding in health facilities.
2. Exclusive breastfeeding for the first six months.
3. Continued breastfeeding for two years and beyond.
4. Feeding the infant in the context of HIV.
5. Use of commercial formula.
6. Complementary foods from the age of six months.
7. Feeding the infant and young child in difficult circumstances.
8. Responsibilities of health care personnel implementing maternal, women, neonatal and child health at national, provincial, district and facility level.

2.4 Target Beneficiaries

Primary Beneficiaries:

- Infants (0-12 months).
- Young children 1 year to 5 years.

Secondary Beneficiaries:

- Pregnant women and partners.
- Mothers/parents/care-givers of infants and young children.
- Health care personnel working at community, primary health care and hospital levels.
- Managers and supervisors implementing maternal, women's and child health, nutrition and HIV and AIDS programmes at all levels.

2.5 Objectives

The aim will be achieved through the following objectives:

- To provide evidence-based information on appropriate infant and young child feeding, including in the context of HIV, to health care personnel to enable them to support pregnant women and mothers of infants and young children.
- To strengthen strategies for increasing the rates of exclusive breastfeeding namely: Mother-Baby Friendly Initiative (MBFI), Kangaroo Mother Care (KMC), human breastmilk banking and Code implementation.[19,20]
- To promote timely introduction of adequate, safe and appropriate complementary foods with continued breastfeeding.
- To define strategies on feeding infants and young children in all settings including exceptionally difficult circumstances.[21]
- To advocate for creation of supportive environments, including in the work place, that will enable mothers to breastfeed exclusively for the first six months and to sustain breastfeeding.
- To standardize and harmonise messages relating to infant and young child nutrition.

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[19] Annexure 4: NDOH, Tshwane Declaration of Support for Breastfeeding in South Africa. Aug 23-24, 2011. Tshwane, South Africa.
[20] NDOH, Strategic Plan for Maternal, Newborn, Child and Women's Health (MNCWH) and Nutrition in South Africa 2012-2016.
[21] See bullet 9.

2.6 Guiding Principles

The policy is guided by the following principles:

- **Protect, respect and fulfil human rights**[22]

  Protecting, respecting and fulfilling human rights implies that:

  i. The child's best interest is of paramount importance.
  ii. Children should enjoy the highest attainable standard of health.
  iii. Children's survival, growth and development should be protected.

  A woman has a right to make decisions about infant feeding on the basis of full information, and to receive support for the course of action she chooses.

- **Effective Governance**

  The Negotiated Service Delivery Agreement (NSDA) for Health, outcome 2: *'a long and healthy life for all South Africans'*, prioritises reducing mortality and morbidity amongst mothers and children and strengthening health system effectiveness.[23]

- **Public health and Primary Health Care approach**

  National, provincial and district-based interventions for infant and young child feeding should adopt a public health and primary health care (PHC) approach. Interventions that promote the highest level of nutrition and well-being for the general population should be promoted. Support for safe infant and young child feeding should be extended between the levels and stages of care to ensure continuity of support at community, primary health care and hospital level.

- **Promoting healthy eating**

  Healthy eating amongst infants and young children should be encouraged and practices proven to be harmful discouraged.

- **Provision of an integrated service**

  Interventions that aim to improve infant and young child feeding should be comprehensive, integrated and equitably distributed.

- **Evidence based**

  Infant and young child feeding strategies and activities are informed by best available evidence.

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[22] These principles are derived from the Convention on the Elimination of All Forms of Discrimination Against Women (1979) and Convention on the Rights of the Child (1989). Article 24, recognises the important role breastfeeding plays in the achievement of the child's right to the highest attainable standard of health.

[23] National Department of Health, Health Sector Negotiated Service Delivery Agreement (NSDA) 2011.

3 RECOMMENDED INFANT AND YOUNG CHILD FEEDING PRACTICES

3.1 The **main infant and young child feeding recommendations** are summarised in the table below.

Main Feeding Recommendation				
HIV-negative women	**Exclusively breastfeed their infants during the first 6 months of life.**	**Introduce adequate, safe and appropriate complementary foods at 6 months.**	Continue breastfeeding for 2 years or longer.	**Breastfeeding cessation needs to occur gradually over one month. Abrupt cessation is discouraged.**
HIV-positive mothers *(and whose infants are HIV uninfected or of unknown HIV status)* <u>On lifelong ART</u>			Continue breastfeeding for 12 months (recommended). The infant should receive ARVs from birth until six weeks of age as prescribed in accordance with current PMCT guidelines.	
HIV-positive mothers (*and whose infants are HIV uninfected or of unknown HIV status)* <u>Not on lifelong ART</u>			Continue breastfeeding for the first 12 months (recommended).The mother and/or infant should receive ARVs as prescribed in accordance with current PMTCT guidelines. This should continue for one week after all breastfeeding has stopped.	
HIV-positive mothers and whose infants are HIV infected			Continue breastfeeding for 2 years or longer.	

3.2 Exception to the above recommendation:

There is evidence that almost all mothers can breastfeed successfully however, a small number of mothers may not be able to breastfeed temporarily or permanently due to personal or health conditions affecting the infant or mother. These conditions are listed in Annexure 1. [24]

All mothers who may still decide not to breastfeed after counseling and education and who meet all of the specific conditions as listed in Box 2, should be educated and given information on age specific types of infant formula to purchase and shown how to prepare and use formula feeds safely. No evidence exists to recommend one brand over another.[25] This education should be provided individually to women who have decided to formula feed whilst maintaining privacy and confidentiality.[26]

Box 2: The specific conditions needed to safely formula feed[27]

1. Safe water and sanitation are assured at the household level and in the community;
2. The mother, or other caregiver can reliably provide sufficient infant formula to support normal growth and development of the infant;
3. The mother or caregiver can prepare it hygienically and frequently enough so that it is safe and carries a low risk of diarrhoea and malnutrition;
4. The mother or caregiver can, in the first six months, exclusively give infant formula milk;
5. The family is supportive of this practice;
6. The mother or caregiver can access health care that offers comprehensive child health services.

Please note: all conditions above should be met. These descriptions are intended to give simpler and more explicit meaning to the concepts represented by AFASS (acceptable, feasible, affordable, sustainable and safe).

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[24] See Annexure 1: Health Conditions.
[25] Owens CJW, Labuschagne IL, Lombard MJ, The basis of prescribing infant formulas, S.Afr Fam Pract 2012, Vol 54 No.1. See also bullet 9 for more information.
[26] WHO.International Code on the Marketing of Breast-milk Substitutes. Geneva, 1981.
[27] WHO. Guidelines on HIV and Infant Feeding 2010. Principles and recommendations for infant feeding in the context of HIV and a summary of evidence. WHO, 2010.

Public health facilities will only provide free infant formula as part of the supplementary feeding programme to infants who have specific medical conditions as listed in Annexure 1 and meet the specified criteria that make it impossible for the mother to breastfeed.[28]

4 POLICY STATEMENTS ON INFANT AND YOUNG CHILD FEEDING

4.1 Antenatal Care (ANC)

Antenatal breastfeeding education and support has shown to improve the rates of exclusive breastfeeding. The goal is to enable mothers to understand the benefits of breastfeeding and to prepare them to breastfeed successfully. During the antenatal period mothers should be equipped with knowledge and skills on how to breastfeed.[29] Pregnant women should be encouraged to visit the antenatal clinic regularly as guided by the basic antenatal care guidelines (four visits for every pregnant women beginning during the first trimester).

During ANC personnel[30] should:

- Promote and encourage women to exclusively breastfeed their infants for the first six months.
- Not recommend formula feeding as an alternative to breastfeeding, unless there are legitimate medical reasons to do so.[31,32]
- Provide women with evidence-based objective and unbiased infant feeding information independent of commercial influence.
- Counsel and provide all pregnant women with micronutrient supplements (i.e. iron-folic acid tablets). Calcium supplements should be given to women at risk of pre-eclampsia.[33]
- Educate and counsel all pregnant women on the following aspects:
  - The benefits of exclusive breastfeeding and continued breastfeeding.

[28] See Annexure 5: Department of Health. Policy Directive for the Implementation of the Declaration on support of exclusive breastfeeding and revised guidelines on IYCF 2011. Pretoria, South Africa
[29] WHO/UNICEF. Protecting, promoting and supporting breastfeeding: the special role of maternity services. WHO, Geneva, 1989.
[30] Health care personnel see definition includes health care providers and health workers (community health workers, lay counsellors)
[31] WHO/UNICEF. Global Strategy for Infant and Young Child Feeding. World Health Organisation, Geneva, 2003.
[32] NDOH, South Africa's National Strategic Plan for a Campaign on Accelerated Reduction of Maternal and Child Mortality in Africa, 2012
[33] NDOH, Guidelines for Maternity Care in South Africa, 2007 and Strategic Plan for Maternal, Newborn, Child and Women's Health (MNCWH) and Nutrition in South Africa 2012-2016.

- The risks and hazards of not breastfeeding.
- Importance of skin-to-skin contact immediately after birth, good positioning and attachment and rooming-in.
- Benefits of NVP prophylaxis for HIV exposed infants during breastfeeding.
- Dangers of mixed-feeding their infants during the first six months.
- Importance of partner support antenatally and postnatally as part of mother friendly care practices.
- The importance of a healthy lifestyle (healthy eating, regular physical activity, safe sex, discourage alcohol consumption and use of tobacco and other drugs).

4.2 Intra-partum (Labour and delivery)

Mother and baby's experiences during labour and delivery are important for successful breastfeeding and can instil confidence in the mother which can impact on her ability to breastfeed.

During the intra-partum period health care personnel should:

- Encourage and supports labour and birth practices to support early breastfeeding namely: labour support when desired, offering light food and fluids, light exercises such as walking.[34]
- Discourage the unnecessary use of analgesics and anaesthetic drugs (unless there is a medical reason) to ease pains due to the adverse effects of these on breastfeeding initiation.[35,36]
- Facilitate and support skin-to-skin contact and early initiation of breastfeeding. This should be recorded in the maternity register. Postpone all routine neonatal procedures that are not life saving (e.g. washing, weighing and non-urgent medical procedures). Dry the newborn, place skin-to-skin with their mothers immediately following birth for at least an hour to facilitate early initiation of breastfeeding which can decrease the risk of maternal hemorrhage, newborn hypoglycaemia[37] and increase exclusive breastfeeding

[34] WHO/UNICEF: BFHI 20hour course for Maternity Staff, 2009 session 5.
[35] Riordan J, Gross A, Angeron J, Krumwiede B. The effect of labor pain relief medication on neonatal suckling and breastfeeding duration. J Hum Lact 16(1), 2000.
[36] WHO, Evidence for the ten steps to successful breastfeeding, 1998.
[37] Zulfiqar A, Bhutta, Gary L. Using Evidence to Save Newborn Lives, Policy Perspective on Newborn Health, 2003.

(unless there is a medical indication not to breastfeed).[38,39]

- Infants are eager and more alert to feed in the first hour. This early suckling by the infant starts the process of milk formation and ensures the infant receives the first breastmilk called colostrum.
- Facilitate skin-to-skin contact even for the mothers who have decided not to breastfeed to encourage bonding.
- Pre-lacteal feeds or any other supplemental feed (e.g. water, glucose water, formula and other fluids) should not be given to the breastfed infant unless medically indicated since it interferes with the success of breastfeeding. Acceptable medical reasons for supplementation of newborn infants who are at risk of hypoglycaemia as outlined in Annexure 1. Mother's own expressed breastmilk is the preferred supplement.[40]
- Ensure that mothers are offered the support necessary to acquire the skills of correct positioning and attachment of their infants for optimal breastfeeding. Explain the necessary techniques to the mother, thereby helping her to acquire the skill for herself.
- Kangaroo Mother Care should be promoted and supported. It is used primarily, though not exclusively, for LBW infants.[41]

4.3 Immediate Postnatal Care for All Mothers

Health facilities should keep mother-infant pairs together (rooming-in and/or bedding-in) throughout the day and night to ensure frequent feeding unless medically contraindicated. This also facilitates and establishes mother-infant relationships and assists with observation of the infant because of the infant's proximity.[42] During this period mothers should be supported to breastfeed successfully.

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38 NDOH, Neonatal Care Guidelines, 2008.
39 Bramson L, Lee JW, Moore E. Effect of early skin-to-skin mother infant contact during the first 3 hours following birth on exclusive breastfeeding during the maternity hospital stay. J Hum Lact OnlineFirst, published on January 28, 2010 as doi:10.1177/0890334409355779.
40 Lang S, Breastfeeding Special Care Babies, 2002 and see Annexure 7.
41 NDOH, Neonatal Care Guidelines, 2008.
42 WHO, Evidence for the ten steps to successful breastfeeding, 1998.

During postnatal care health care personnel should:

- Promote and support exclusive breastfeeding for six months.[43,44] Mothers should understand the risks associated with mixed feeding.
- Explain, show and assist mothers to acquire the skills for breastfeeding and infant feeding in accordance with the MBFI practices[45] and KMC.
- Allow mothers and infants remain together 24 hours a day unless for an individual clinical need.
- Counsel all breastfeeding mothers (HIV-negative and positive) about postnatal transmission of HIV and encourage them to practice safe sex during the breastfeeding period. Postnatal transmission and re-infection increases MTCT risk through breastfeeding.
- Encourage mothers (or their infants) to take antiretroviral treatment as prescribed to prevent HIV transmission whilst breastfeeding.
- Mothers who have decided not to breastfeed after counselling and education should be given information on age specific types of infant formula to purchase and shown how to prepare and use formula safely.[46]
- Provide the mother upon discharge with information where to get continued infant feeding support if she needs it after discharge.
- Record infant feeding practice on discharge in the maternity register, RtHB and the mother's postnatal record (give this to mother to keep for postnatal care).

4.4 On-going Infant and Young Child Feeding Support

Efforts to extend breastfeeding include the continued support from health care personnel, peers, family, and the creation of enabling breastfeeding friendly environments in a range of settings including work places, child care and public spaces, and the broader community.

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[43] WHO. The optimal duration of exclusive breastfeeding: A systematic review. Geneva,2002. Available at: http://www.who.int/child-adolescent health/New_Publication/Nutrition/WHO_CAH_01_24.pdf.

[44] NDOH, South Africa's National Strategic Plan for a Campaign on Accelerated Reduction of Maternal and Child Mortality in Africa, 2012.

[45] See Annexure 6 and UNICEF & WHO. Strengthening and sustaining the Baby Friendly Hospital Initiative: A short course for decision-makers. 2006.

[46] See Section 3.2

At Primary Health Care

During on-going postnatal care, health care personnel should:

- Follow up mother-infant pairs within 6 days of discharge to review feeding practices, check breast health, maternal health and child health, and provide general support. Ideally breastfeeding women should be supported within 3 days after delivery.

During subsequent visits health care personnel should:

- Counsel mothers and reinforce exclusive breastfeeding for the first six months.
- At every visit assess and counsel mothers regarding feeding practices and discourage mothers from introducing other foods and fluids before six months.
- Counsel mothers and promote appropriate complementary feeding from six months of age.
- Provide additional counselling sessions when:
  - The child is sick.
  - The mother returns to work.
  - The child's HIV test results become available.
  - The mother starts ART.
  - The mother decides to stop breastfeeding.
- Encourage and support mothers to continue breastfeeding.[47]
- Counsel mothers on how to stop breastfeeding over a one month period.
- Counsel mothers about how to continue breastfeeding when they return to work or school. This should include information on night feeds and how to express and store breastmilk during the day.
- Counsel women who have decided to formula feed their infants to exclusively formula feed and reinforce how to prepare and use formula feeds accurately and safely. This should be done individually (not group counselling) only for those mothers who have decided to formula feed to avoid spill-over to breastfeeding mothers. Discuss the amount of formula required by infants at each clinic visit.
- Counsel and discourage the use of dummies or artificial teats and feeding bottles and show mothers how to feed their infant with an open rimmed cup (without a spout or straw).

[47] See section 3, recommendation on the duration of breastfeeding.

- Discuss cleaning and sterilisation of feeding utensils only for those mothers who are formula feeding. This should be done individually (not group teaching) and record on the RtHB.

Box 3: Preventative Child Health Interventions

During postnatal care and on-going Child Health visits, health care personnel should:

- Before discharge from the maternity unit provide the RtHB approved by the National Department of Health and plot the birth weight and length of the infant.
- Weigh and measure and plot the infant's weight and length in the RtHB during regular visits according to the RtHB to monitor the health, growth and development of the infant and young child.
- Ensure timely child health visits for immunisation, vitamin A supplementation, deworming and infant and young child feeding counselling to the mother or caregiver.
- Provide information to parents on appropriate child care practices including providing stimulation, love, care and opportunities for play.
- Ongoing care for HIV-exposed infants including provision of nevirapine and cotrimoxazole, and PCR testing and follow-up at six weeks.

4.5 Stopping breastfeeding

- Stopping breastfeeding should be done gradually over a one month period. Stopping breastfeeding abruptly can affect breast health and cause distress to the child and the mother.[48]
- Mothers and/or infants who have been receiving ARV treatment to prevent HIV transmission during pregnancy and breastfeeding (i.e. not lifelong ART) should continue treatment for one week after breastfeeding is fully stopped.[49]

[48] WHO/UNICEF: Breastfeeding promotion and support in a BFHI, 20-hour course for maternity staff, 2009.
[49] WHO (2010). Guidelines on HIV and Infant Feeding 2010. Principles and recommendations for infant feeding in the context of HIV and a summary of evidence. WHO, 2010.

4.5.1 What to feed infants when mothers stop breastfeeding

In some instances mothers may be unable to breastfeed or provide breastmilk either temporarily or permanently. See annexure 1 for list of justifiable conditions.

4.5.1.1 For infants less than six months of age:

- Infant formula as long as specific conditions outlined in Box 2 are fulfilled. Mothers should be given a schedule on how much to feed according to the weight of the infant.
- Expressed, heat-treated breastmilk.
- Breastmilk from human milk banks.

4.5.1.2 For infants over six months of age:

- Infant formula as long as specific conditions outlined in Box 2 are fulfilled. Mothers should be given a schedule on how much to feed according to the weight of the infant.
- Pasteurised full cream milk may be introduced to the non-breastfed infant's diet from 12 months of age. According to the World Health Assembly Resolution (WHA39.28) in 1986 follow-up formula is not necessary.
- Where infant formula is not available, children over six months may temporarily receive undiluted pasteurised full cream milk (boiled), provided that iron supplements or iron-fortified foods are consumed and the amount of fluid in the overall diet is adequate.[50,51]

5 HUMAN MILK BANKING

- Human milk banks should be promoted and supported as an effective approach, to reduce early neonatal and postnatal morbidity and mortality for babies who cannot be breastfed.[52]
- Human milk banks should be established in facilities caring for high risk infants.
- Priority for donor human milk should be given to high risk infants (as listed in Box 4) who have no access to mother's own breastmilk.

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[50] World Health Organisation. WHO Technical Background Paper. Feeding of nonbreastfed children from 6 to 24 months of age in developing countries. Food and Nutrition Bulletin, vol.25, no.4. 2004.

[51] World Health Organisation. WHO Guiding principles for feeding non-breastfed children 6-24 months of age. 2004.

[52] Annexure 4: NDOH, Tshwane Declaration of Support for Breastfeeding in South Africa. Aug 23-24, 2011. Tshwane, South Africa.

Box 4: High risk infants to be prioritised for donor human milk

- Very Low Birth Weight Infants (< 1500g)
- Very pre-term infants (Infants born at less than 32 weeks of gestational age)
- Low Birth Weight Infants (< 2500g)
- HIV exposed infants who are not able to suckle or mothers too sick to breastfeed.

6 BREASTFEEDING AT WORK PLACES

To facilitate continuing exclusive breastfeeding up to six months and continued breastfeeding beyond 6 months a breastfeeding supportive work place is needed when mothers return to work. Work places should adopt a work place breastfeeding policy that meets the needs of employees while also taking account of work place conditions.[53]

The policy should ideally include the following:

- A designated area with adequate hygienic conditions at or near the working place for breastfeeding employees, that allows them to express in privacy, comfort and store their milk.
- Breastfeeding / breastmilk expression breaks with regard to their frequency – this may need to be negotiated between the employer and an employee that takes account of both employee and organisational needs.
- Establishment of child care facilities at or near the working place should be considered.

Awareness should be raised about the benefits of breastfeeding for both the employees and employers.

Supervisors and managers should offer breastfeeding employees the necessary support, if needed.

[53] Code of Good Practice on the protection of employees during pregnancy and after the birth of a child issued in terms of Section 87(1) (b) of the Basic Conditions of Employment Act (BCEA)75 of 1997. The Code obliges employers to implement appropriate measures to protect pregnant and breastfeeding employees.

7 INFANT AND YOUNG CHILD FEEDING AT COMMUNITY LEVEL

All mothers or caregivers of infants and young children need support with infant and young child feeding. At community level breastfeeding promotion, support and protection should be a key component of the work of community health workers and primary health care teams.

- During outreach visits infant and young child feeding practices should be assessed and support should be provided.[54]
- Health care personnel at PHC facilities should assist with the establishment of support groups and involvement of key players in breastfeeding promotion.
- Promotion of safe infant feeding practices should be included as a core component of health promotion strategies.
- Community support systems should assist mothers with breastfeeding techniques to ensure exclusive breastfeeding, and continued breastfeeding with appropriate complementary feeding.

8 COMPLEMENTARY FEEDING FOR INFANTS SIX MONTHS AND OLDER

From six months (180 days) of age infants need breastmilk and complementary foods to promote health, support growth and enhance development. This is called complementary feeding.

All parents should be advised to introduce complementary foods from 6 months and gradually increase the frequency, consistency and variety of locally available foods. Parents should be advised on how to prepare home based complementary foods.

Health care personnel should:

- Educate and counsel all mothers, and caregivers on the following aspects of complementary feeding and encourage continued frequent, on-demand breastfeeding until 2 years of age or beyond.[55,56]

[54] NDOH, Provincial Guidelines for the implementation of the three streams of PHC Re-engineering, 2011.
[55] World Health Organisation. WHO Guiding principles for feeding non-breastfed children 6-24 months of age. 2004.
[56] PAHO, Guiding principles for Complementary feeding of the breastfed child. 2002.

- *Timely* – meaning complementary foods should be introduced from six months of age, when the need for energy and nutrients exceeds what can be provided through exclusive and frequent breastfeeding. Discourage early introduction and late introduction of complementary foods.
- *Appropriate foods* – From the age of six months, breastmilk does not provide adequate iron. Therefore, iron rich foods should be introduced and the consumption of locally available nutrient-dense foods such as Vitamin A rich vegetables and fruits should be encouraged. Tea and coffee should not be offered to infants and young children. Tea and coffee contain tannins and caffeine that bind iron, thereby reducing their bioavailability. Sweetened drinks should be avoided as these increase the risk of dental caries and inhibit the consumption of nutrient-dense foods.
- *Meal frequency and quantities* – Infants should receive small, frequent, nutrient-dense meals due to their limited gastric capacity and high nutrient needs. Increase the quantity and number of times that the child is fed complementary foods as he/she gets older.
- *Food consistency* – Food consistency should gradually be increased from pureed to solid foods by 12 months. Foods that may cause choking should be avoided. Examples of these are nuts, grapes, raw carrots.
- *Safe* – meaning complementary food should be freshly and hygienically prepared.
- *Responsive/active feeding* – These methods include the active supervision and encouragement from the caregiver.

- Counsel mothers and caregivers against pre-mastication (pre-chewing) of the child's food, especially in communities in which HIV and hepatitis B are prevalent.
- Counsel mothers on the long term impact of the early introduction of foods and fluids, i.e. before the age of six months, on childhood obesity.
- Mothers should be discouraged from adding cereals or soft porridge to feeding bottles.
- Counsel parents and caregivers on and promote healthy eating and daily physical activity, including play.
- Infants and young children should be referred to a dentist/dental therapist/oral hygienist for evaluation to identify those at risk of dental caries or other oral health problems and provide the necessary treatment. Oral Hygienists should provide preventive oral health programmes/treatment.

9 INFANTS AND YOUNG CHILDREN IN EXCEPTIONALLY DIFFICULT CIRCUMSTANCES

Special attention and practical support should be given for feeding infants and young children in exceptionally difficult circumstances.

9.1 Low birth weight (LBW) infants

Health care providers should have the necessary skills required for feeding LBW and premature infants.

- Early initiation of breastfeeding and KMC should be promoted and supported.[57,58]
- The emotional and social wellbeing of these mothers should be supported during their stay in hospital. These mothers may exhibit symptoms of depression, especially during the acute phase of the infant's hospitalization in the neonatal ICU.[59] If support is not provided breastmilk production can be compromised.
- Mothers should be educated on the differences in the nutritional composition of premature breastmilk and the suitability thereof. Milk produced during the first month following birth by mothers delivering prematurely contains significantly higher concentrations of protein, sodium, and chloride, and lower concentrations of lactose than milk produced by mother delivering at term.[60]
- All preterm infants' mothers should be counselled and supported in expressing their own breastmilk for feeding their infants. Expression should ideally be initiated within 3 hours of delivery so that the infant gets the benefits of feeding colostrum. Thereafter, it should be done 2-3 hourly - this would ensure that the infant is exclusively breastfed and also helps in maintaining lactation.

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[57] NDOH, Guidelines for Neonatal Care, 2008.
[58] NDOH, South Africa's National Strategic Plan for a Campaign on Accelerated Reduction of Maternal and Child Mortality in Africa, 2012.
[59] Anxiety and Depression in Mothers of Preterm Infants and Psychological Intervention During Hospitalization in Neonatal ICU, The Spanish Journal of Psychology 2009, Vol. 12, No. 1, 161-170.
[60] Gross SJ, Geller J, Tomarelli RM. Composition of Breastmilk from Mothers of Preterm Infants, Paediatrics 1981; 68;490.

- Donor milk from human breastmilk banks is recommended for infants whose mothers are unable to provide their own milk in neonatal care.
- The use of infant formula should be discouraged unless the infant or mother has a medical condition that precludes breastfeeding. In such cases a special low birth weight formula should be prescribed by a health care provider and given until the infant weighs 2,5 kg.
- A soy protein based formula should not be prescribed due to renal immaturity and the composition of soy based formula. The bioavailability of nutrients is less due to the presence of high levels of phytate and the amino acid profile is not optimal. [61,62,63]
- Health care personnel should discourage the use of dummies or artificial teats and feeding bottles (as this may result in nipple confusion) and show mothers how to cup feed their infant with an open rimmed cup.
- When breastfeeding alone has failed to produce the desired results, increasing the proportion of hind-milk fed to the LBW infant has been shown to be beneficial in promoting weight gain. Hind-breastmilk has a greater energy and fat content than fore- milk.[64]
- A breastmilk fortifier may be needed for infants weighing less than 1500g (very low birth weight infants) and/or for infants born at less than 32 weeks of gestational age (very pre-term) and only when 100ml/kg/day pre-term human milk is tolerated.[65]

9.2 Hospitalised infants, children and mothers

- Should hospitalisation of the breastfeeding mother or infant be necessary, every effort should be made to maintain exclusive or continued breastmilk feeding.

Health facilities should:

- Have lodger facilities for breastfeeding mothers.[66]
- Support and promote the use of mother's own expressed breastmilk or facility-based human milk banking if the mother cannot lodge.
- Assist hospitalised breastfeeding mothers to continue breastfeeding unless their medical condition or medication precludes breastfeeding.

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[61] Agostoni C, Axelsson I, Goulet O and others, Soy Protein Infant Formulae and Follow-on Formulae: A Commentary by the ESPGHAN Committee on Nutrition, Journal of Pediatric Gastroenterology and Nutrition, 42:352-361, April 2006.
[62] Yu VYH, Enteral Feeding in the preterm infant, Early Human Development (1999) 89 – 115.
[63] Bhatia J, Greer F and the Committee on Nutrition, Use of Soy Protein-Based Formulas in Infant Feeding, Pediatrics 2008; 121; 1062-1068.
[64] Lang S, Breastfeeding Special Care Babies, 2002.
[65] WHO/UNICEF, Acceptable medical reasons for use of BMS, 2009.
[66] NDOH, South Africa's National Strategic Plan for a Campaign on Accelerated Reduction of Maternal and Child Mortality in Africa, 2012.

- Provide infants (<12 months), an appropriate infant formula according to weight and age during hospitalisation if a mother is not able to breastfeed for medical reasons applicable to the mother or the child.[67] To reduce infection/contamination infants should receive the infant formula from the hospital facility, where strict hygienic procedures are followed, during hospitalisation. Upon discharge a prepared infant formula feed can be provided if the mother has to travel a long distance.
- Provide adequate age-appropriate complementary foods to hospitalised infants over six months of age.
- Provide full cream milk to a young child from one year of age unless the child is on a specialised formula.
- The growth of hospitalised infants and young children should be regularly monitored. If not gaining weight investigate possible causes and review nutrition intervention and put corrective measures in place (e.g. increasing meal frequency and or increase nutrient density of the meals).

9.3 Severe Acute Malnutrition (SAM) in infants and young children

- Infants and young children not gaining weight should be assessed and classified.
- Infants and young children with severe acute malnutrition with medical complications should be admitted to a hospital.
- Infants and young children who are breastfeeding should continue breastfeeding as part of the clinical management.
- All health facilities with paediatric wards should have and should implement protocols for the management of severe acute malnutrition.
- All health care personnel working in the paediatric wards should be trained on the protocol for the management of severe acute malnutrition to improve skills on appropriate nutrition action.
- Health facilities should ensure they provide the recommended therapeutic feeds to stabilise or rehabilitate malnourished children as outlined in the national protocol for the treatment of children with severe acute malnutrition.
- Health facilities should ensure that upon discharge parents and caregivers should be provided with nutrition counselling and appropriate nutrient supplements to facilitate recovery, growth and development to prevent relapse.

[67] See Annexure1: Acceptable medical reasons for use of BMS.

9.4 Orphans, children in foster care, and children whose mothers are incapable of caring for them due to ill health or mental disabilities

- The facility should ensure that infants and young children falling under this category receive proper support and/or referred appropriately.

9.5 Children suffering the consequences of emergencies, including natural or human-induced disasters, floods and droughts

- In the event of an emergency, during the relief and rehabilitation phase, as far as possible, mothers should never be separated from their children.
- Pregnant and lactating mothers should be provided with adequate food.
- Infants and young children should receive appropriate and adequate food.
- Exclusive breastfeeding for infants under six months and sustained breastfeeding until 2 years or beyond should be supported and promoted.
- The distribution of free formula should not target breastfeeding mothers as this would undermine breastfeeding.
- When donated commercial formula is used the following conditions should be met :
  - Only be issued to infants who are formula fed.
  - Comply with all the relevant regulations under the Foodstuffs Act.
  - No expired products should be donated.
  - Ensure potable boiled water is available and that it can be prepared safely.
  - Be age appropriate
  - Cup feeding should be promoted, as bottle feeding may further compromise the health of the infant.
  - Mothers' of very young infants may be encouraged to re-lactate.

9.6 Infants with inborn errors of metabolism

- Any child suspected of having an inborn error of metabolism should be diagnosed by a medical practitioner and referred to a dietitian for further nutritional management
- Depending on the inborn error of metabolism an infant may need to be fed exclusively with a specialised product (such as in the case of galactosaemia) or the infant may be breastfed with partial replacement with a specialised product (as in the case of phenylketonuria).

- Where there are legitimate medical conditions, as diagnosed by a medical practitioner, or when a mother is incapable of caring for her infant or young child, health care personnel should recommend infant formula feeding as an alternative feeding option for up to 12 months.[68]

10 INFANT FORMULA

10.1 Use of Infant Formula in Health Facilities

- Health care personnel should take steps to ensure that the provision of free commercial formula to women with medical conditions does not undermine breastfeeding promotion efforts.
- Health facilities should have protocols on safe preparation, handling, delivery, disposal and storage of infant formula. Health care personnel should be trained in these protocols.
- Health care personnel should provide mothers and caregivers who are replacement feeding with information on how to prepare, handle and store formula feeds, to reduce the risk of contamination with pathogens.
- All health facilities should have a dedicated area (closed room) and necessary equipment available for demonstrating the preparation and use of powdered infant formula.
- Health care personnel should be able to demonstrate the preparation of powdered infant formula safely and correctly to those mothers who need to use it.

10.2 Infant formula for special dietary management

The majority of infants who are not breastfed can use standard infant formula but a small percentage of infants may require specialised infant formulas for special dietary management due to specific medical conditions. This will depend on gestational age and the presence of a medical condition. These formulas should only be used under supervision of a health care provider after confirmation of a medical diagnosis. The table in Annexure 1 provides a guide on acceptable medical reasons for use of formula.[69,70]

[68] See Annexure 7.
[69] Owens CJW, Labuschagne IL, Lombard MJ, The basis of prescribing infant formulas, S.Afr Fam Pract 2012, Vol 54 No.1. See also bullet 10 for more information.
[70] UNICEF UK, The health professional's guide to: "A guide to infant formula for parents who are bottle feeding". 2010.

10.3 Code of Marketing of Breastmilk Substitutes / Regulations relating to Foodstuffs for Infants and Young Children

All health care personnel caring for mothers, infants and young children should:

- Adhere to all the provisions of the International Code of Marketing of Breastmilk Substitutes and its subsequent resolutions which will be superseded by the South African Regulations relating to Foodstuffs for Infants and Young Children once these enter into force.[71,72,73]
- Report in writing to the relevant provincial nutrition unit regarding any contraventions of the provisions of the Code and Regulations once they enter into force.

Research involving the use of infant formula, follow-up formula and or complementary food products in health facilities should be:

- Approved by the relevant Provincial and National Research Units.
- In accordance with the relevant Department of Health policies and should be subject to the Code and the relevant regulations where applicable.

11 RESPONSIBILITIES OF PROVINCES, DISTRICTS AND HEALTH FACILITIES

- All relevant staff should be orientated to this policy and receive appropriate training to implement this policy.
- All health facilities with maternity units should implement the Mother-Baby Friendly Initiative (MBFI).
- All health facilities which provide in-patient newborn care should implement KMC.
- Effective strategies for the protection, promotion and support for infant feeding should be adopted at all levels.
- Implementation plans should be developed to implement this policy and should include training and advocacy strategies.

[71] Sokol EJ. The code handbook: a guide to implementation the International Code of Marketing of Breastmilk Substitutess. International Code Documentation Centre/ IBFAN, Penang, 1997.
[72] WHO. The International Code of Marketing of Breastmilk Substitutes. Geneva, 1981. Available at: http://www.who.int/nut/documents/code_english.PDF.
[73] DOH. Regulations relating to Foodstuffs for Infants and Young Children, R991. 6 December 2012.

- Resources from the infant food industry (manufacturers and distributors) should not be accepted/used to promote, protect and support breastfeeding and infant and young child feeding and nutrition activities.[74]
- In line with the International Code of Marketing of Breastmilk Substitutes and relevant with resolutions interaction and support from industry personnel should not result in conflict of interest.[75]
- World Breastfeeding Week celebrated every year during the first week of August should be use as a major advocacy tool.
- Community participation in primary health care activities including infant and young child feeding should be promoted.

12 IMPLEMENTATION OF THE POLICY

- Disseminate the National Infant and Young Child Feeding Policy amongst all key stakeholders (e.g. provinces, districts, health establishments, NGO's).
- Provinces, districts and health facilities to hold dissemination sessions and to draw up action plans for the implementation of the IYCF policy e.g. advocacy, expansion of MBFI and training of health care personnel.
- Provinces to draft and disseminate a circular regarding the implementation of the policy.
- Develop implementation guidelines to strengthen the implementation of the policy.
- Review and align related, strategies, guidelines and educational material and make sure IYCF has been correctly reflected in these documents.
- Evaluation of the policy will be done to identify progress/gaps in policy implementation, and these evaluation results will be disseminated to stakeholders.

[74] See Annexure 4: Commitment of Tshwane Declaration for Support of Breastfeeding.
[75] WHA Resolutions: WHA 49.15 of 1996, WHA 58.32 of 2005, WHA 65 of 2012.

13 MONITORING AND EVALUATION (M&E)

To ensure the effective implementation of the policy, monitoring should be an integral part of programme management, with clear indicators for monitoring.

Indicators would include:	How it will be monitored or evaluated:
• Number of facilities that have received the Policy.	Facility audit
• % of mothers initiating breastfeeding within one hour post delivery.	Surveys
• % of mothers who are exclusively breastfeeding at 14 weeks	Surveys / DHIS
• % of infants 0-6 months exclusively breastfeeding	Surveys
• The number of MBFI facilities	MBFI assessments and reassessments
• Number of Human Milk Banks established	Provincial Reports
• Support systems for breastfeeding mothers	In collaboration with Departments of Public Service Administration (DPSA) and Labour.
• Number of violations of the Code/Regulations	Monitoring by designated inspectators and surveys

ANNEXURES

Annexure 1: Health conditions and the use of infant formula

Acceptable medical reasons for use of infant formula or infant formula for special dietary management[76]

Almost all mothers can breastfeed successfully nevertheless, a small number of conditions the infant or the mother may justify recommending that she does not breastfeed temporarily or permanently. These conditions, which concern very few mothers and their infants, are listed below together with some health conditions:

Infants who should not receive breastmilk or any other milk except specialized formula

- Infants with classic galactosaemia: a special galactose-free formula is needed.
- Infants with maple syrup urine disease: a special formula free of leucine, isoleucine and valine is needed.
- Infants with phenylketonuria: a special phenylalanine-free formula is needed.

Maternal conditions that may justify temporary avoidance of breastfeeding

- Severe illness that prevents a mother from caring for her infant, for example sepsis.
- Herpes simplex virus type 1 (HSV-1): direct contact between lesions on the mother's breasts and the infant's mouth should be avoided until all active lesions have resolved.
- *Maternal medication:*
  - sedating psychotherapeutic drugs, anti-epileptic drugs and opioids and their combinations may cause side effects such as drowsiness and respiratory depression and are better avoided if a safer alternative is available;
  - radioactive iodine-131 is better avoided given that safer alternatives are available - a mother can resume breastfeeding about two months after receiving this substance;
  - excessive use of topical iodine or iodophors (e.g., povidone-iodine), especially on open wounds or mucous membranes, can result in thyroid suppression or electrolyte abnormalities in the breastfed infant and should be avoided;
  - cytotoxic chemotherapy requires that a mother stops breastfeeding during therapy.

[76] WHO/NMH/NHD/09.01, Acceptable medical reasons for use of breast-milk substitutes.

Infants who qualify to receive infant formula as part of the supplementation scheme

- The mother has died or infant has been abandoned.
- Other individual unique medical circumstances that may be deemed necessary by the health multidisciplinary team.

Maternal conditions during which breastfeeding can still continue, with guidance:

- Breast abscess: breastfeeding should continue on the unaffected breast; feeding from the affected breast can resume once treatment has started.
- Hepatitis B infection: infants should be given hepatitis B vaccine, within the first 48 hours or as soon as possible thereafter.
- Hepatitis C infection.
- Mastitis infection: if breastfeeding is very painful, milk must be removed by expression to prevent progression of the condition. The breastmilk can be heat-treated.
- Tuberculosis: mother and baby should be managed according to national tuberculosis guidelines. If mother and infant are on treatment breastfeeding may continue.
- Substance use: Mothers should be encouraged not to use these substances, and given opportunities and support to abstain
  - maternal use of nicotine, alcohol, ecstasy, amphetamines, cocaine and related stimulants has been demonstrated to have harmful effects on breastfed babies;
  - alcohol, opioids, benzodiazepines and cannabis can cause sedation in both the mother and the baby.

Infants for whom breastmilk remains the best feeding option but who may need other food in addition to breastmilk for a limited period

- Infants born weighing less than 1500 g (very low birth weight).
- Infants born at less than 32 weeks of gestational age (very pre-term).
- Newborn infants who are at risk of hypoglycaemia by virtue of impaired metabolic adaptation or increased glucose demand (such as those who are preterm, small for gestational age or who have experienced significant intrapartum hypoxic/ischaemic stress, those who are ill and those whose mothers are diabetic) if their blood sugar fails to respond to optimal breastfeeding or breast-milk feeding.

HIV positive women, whose infants are HIV negative after one year and still want to continue feeding breastmilk can express and heat-treat the breastmilk.

Table: Guide of infant formula and the indication of use[77,78]

	Indication for use	Comments
Preterm infant formula	Premature infants <37 weeks gestation Birth weight less than 2 kg who is not breastfed.	Breastmilk is the best source of nutrition for all infants, including premature infants
Standard infant formula 0-6 months of age, but can be used up to 12 months of age	Healthy term infants	Protein source: Whey-dominant 60% Whey 40% Casein
Standard infant formula 0-6 months of age, but can be used up to 12 months of age	Healthy term infants	Protein source: Casein-dominant 20% Whey 80% Casein
Follow-up formula from 6 months of age and young children	Healthy term infants older than 6 months	Protein source: Casein-dominant Not to be used for infants younger than 6 months of age
Soy-based infant formula	Primary lactase deficiency Galactosaemia	Not for routine use as mineral absorption is less predictable due to the presence of high levels of phytates. Have a phytoestrogen content that may pose a long-term reproductive health risk. Not to be given to prevent or treat colic.
Anti-reflux formula	Reflux associated with failure to thrive, respiratory symptoms and esophagitis	
Extensively hydrolysed formula	Diagnosed cows milk allergy	
Lactose-free-formula cow's milk based	Secondary lactose intolerance due to infections or malnutrition Soya allergy	

[77] Owens CJW, Labuschagne IL, Lombard MJ, The basis of prescribing infant formulas, S.Afr Fam Pract 2012, Vol 54 No.1. See also bullet 10 for more information.
[78] UNICEF UK, The health professional's guide to: "A guide to infant formula for parents who are bottle feeding". 2010.

	Indication for use	Comments
Free amino-acid based formula	Highly allergic infant	
Semi-elemental	Mal-absorption and certain metabolic disorders, short bowel syndrome (ileostomies, surgery etc.)	Use for a period of time and then change to a standard formula
Breastmilk fortifier	Poor weight gain in very LBW (<1 500g) or premature infants (<32 weeks) *(refer to page 27 for criteria)*	Full enteral feeds should be reached before initiation of fortification
Goat's milk-based infant formula	Not suitable for infants	

Annexure 2: Research evidence and situational analysis*

1 Breastfeeding and child survival (excluding HIV)

Appropriate feeding practices are essential for the survival, optimal nutritional status, growth, and development of infants and young children. This includes early initiation of breastfeeding within one hour of birth, exclusive breastfeeding for the first six months of life and introduction of nutritionally adequate safe complementary foods at age six months while sustaining breastfeeding for two years and beyond. There is considerable evidence that exclusive breastfeeding for six months confers many benefits over mixed feeding.[1-5]

The Bellagio Child Survival Group summarizing accumulated international research evidence states: “Infants aged 0–5 months who are not breastfed have seven-fold and five-fold increased risks of death from diarrhoea and pneumonia respectively, compared with infants who are exclusively breastfed. At the same age, non-exclusive rather than exclusive breastfeeding results in a more than two-fold increased risk of dying from diarrhoea and pneumonia.[5, 6]

Growing evidence points to the impact of early initiation of breastfeeding on neonatal mortality. A 2006 study in rural Ghana showed that early initiation within the first hours of birth could prevent 22% of neonatal deaths, and initiation within the first day, 16% of deaths, while a study in Nepal found that approximately 19% and 8% of all neonatal deaths could be avoided with universal initiation of breastfeeding within the first hour and first day of life respectively. In addition, evidence for the specific child survival benefits of continued breastfeeding from 6 to 24 months or longer points to continued protection against illness such as diarrhoea and respiratory infection.[1]

More than half of the deaths amongst children under the age of 5 years are associated with malnutrition or lack of optimal breastfeeding.[1] Exclusive breastfeeding compared with mixed breastfeeding has been shown to be associated with a reduced incidence of diarrhoea, respiratory infections and allergy.[3, 7] Breastfeeding is a key child survival strategy in resource-poor countries.[8]

** See references at end of Annexure 2*

A review of child survival interventions from 42 countries that are feasible for delivery at high coverage in low-income settings showed that the promotion, support and protection of breastfeeding is effective in preventing death from diarrhoea, pneumonia and neonatal sepsis. On a population level, universal coverage with EBF for six months, and continued breastfeeding up to one year may prevent 13% of under-five deaths in countries with a high HIV prevalence and high under-5 mortality rate. In countries with low HIV prevalence, 15% of deaths in children younger than 5 years could be prevented. This far outweighs the number of deaths that can be prevented from any other single preventive intervention.[3, 5, 7, 8] Refer to Figure 1.

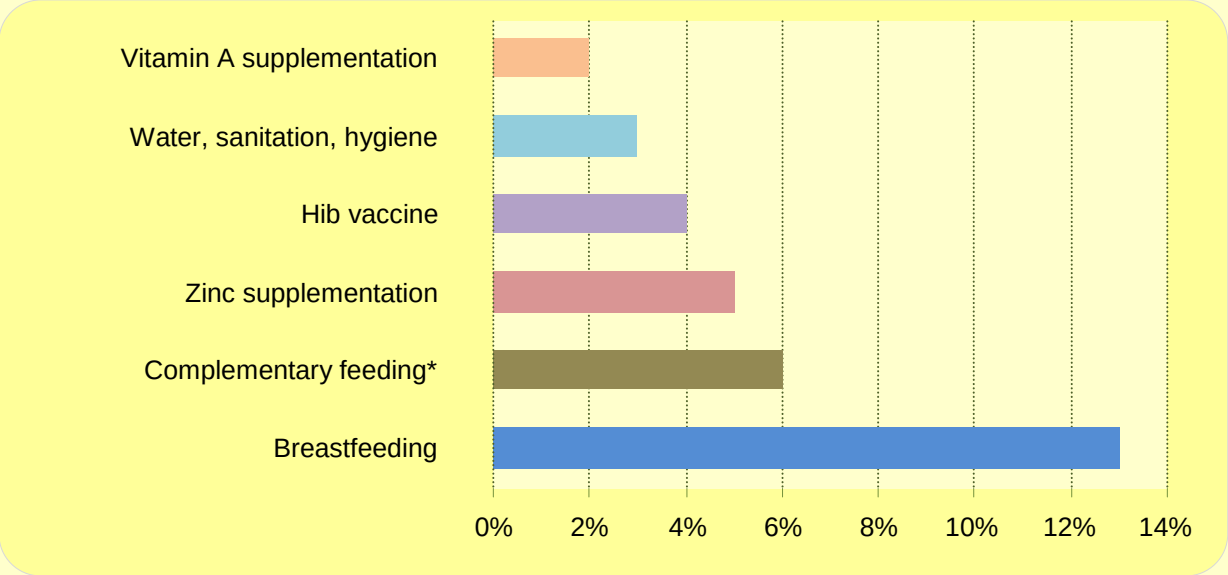

Figure 1: Estimated percentage of preventable death for different preventive interventions [17]

* *Complementary feeding with continued breastfeeding*

There is also strong evidence that exclusive breastfeeding for the first 6 months may reduce the risk of obesity and other non-communicable diseases (NCD) including cardiovascular disease and cancer and can improve educational levels and cognition later in life.[3, 7]

2 Human Immunodeficiency Virus (HIV) and child survival

Significant programmatic experience and research evidence regarding HIV and infant feeding have accumulated since publication of the 2006 WHO guidelines. The 2006 recommendations formulated in the absence of postnatal ARV interventions, recognised that for infants born to

HIV-infected mothers living in circumstances where environmental or social conditions were not suitable for safe replacement feeding, exclusive breastfeeding for the first 6 months of life offered a greater likelihood of HIV-free survival. WHO recommended then that health workers should assist individual mothers to assess their circumstances and determine the most appropriate feeding practice using a set of specific conditions specified as affordable, feasible, acceptable, sustainable and safe generally referred to as AFASS conditions for replacement feeding.[2]

This reflected the balance of risks, which have often been explained as two sides of a scale – one side is weighed down by the risks of children becoming infected with HIV through breastfeeding and the other is weighed down by the risk of morbidity and mortality from non-HIV infectious diseases e.g. diarrhoea, pneumonia and malnutrition as a result of not breastfeeding. The risk of mortality as a result of not breastfeeding has been documented amongst HIV-exposed infants in numerous sub-Saharan settings, including South Africa.[9]

According to the 2003 National PMTCT Cohort study at least 30% of HIV-infected women who chose to formula feed and who were provided with formula milk, did not exclusively formula feed and often fed other food along with breastmilk.[10, 11] Mixed feeding, defined as feeding breastmilk as well as other milks (including commercial formula or home-prepared milk), foods or liquids, results in the highest rate of HIV transmission.[12-17]

In a systematic review of the effect of different infant feeding practices, in the absence of ARVs, on HIV-free survival and other mortality, decreased HIV transmission in the first six months of infant life was associated with exclusive breastfeeding (EBF) compared to non breastfeeding and mixed feeding.[16, 18]

Since 2006, evidence that ARV interventions to either the HIV-infected mother or the HIV-exposed infant can significantly reduce the risk of postnatal transmission of HIV through breastfeeding has been reported.[19] With ARVs, 98% of infants' breastfed by HIV infected mothers for 12 months are unlikely to be infected with HIV (assuming good adherence with ARVs).

In 2010 the WHO advocated a public health approach that focusses more on the effectiveness of the interventions than on the process of individual choice. The benefits of breastfeeding with

antiretroviral (ARV) prophylaxis should be weighed against the risk of HIV transmission through breastfeeding. WHO recommends that national or sub-national authorities should decide whether health services will principally counsel and support HIV-infected mothers to breastfeed and receive ARV interventions, or avoid all breastfeeding, to improve HIV-free survival.[20] The WHO further advises that HIV-infected mothers should only give commercial infant formula milk as a breastmilk substitute when specific conditions are met.[21]

In circumstances where ARVs are unlikely to be available, such as acute emergencies, breastfeeding of HIV-exposed infants is also recommended by WHO to increase survival.[2]

The possible mechanisms through which exclusive breastfeeding has a lower risk of transmission than mixed feeding are described below:[13-18, 20]

- Exclusive breastfeeding protects the integrity of the intestinal mucosa, which in turn hinders passage of HIV.
- Exclusive breastfeeding is associated with fewer breast health problems than is mixed feeding. These include sub-clinical mastitis and breast abscesses, which in turn are associated with increased breastmilk viral load.
- Ingestion of contaminated water, fluids, and food may lead to gut mucosal damage and disruption of immune barriers. Bacteria and other contaminants may be introduced into the gut, and result in inflammatory responses and subsequent damage to the mucosa. HIV is less likely to penetrate intact and healthy gastrointestinal mucosa than damaged mucosa.

Early cessation of breastfeeding (before 6 months) was associated with an increased risk of infant morbidity (especially diarrhoea) and mortality in HIV-exposed children in studies from Malawi, Kenya, Uganda and Zambia. According to data presented from Botswana and Zambia breastfeeding of HIV-infected infants beyond 6 months was associated with improved survival compared to stopping breastfeeding.[20]

Enabling breastfeeding in the presence of ARV interventions to continue to 12 months avoids the complexities associated with stopping breastfeeding and providing a safe and adequate diet without breastmilk to the infant 6–12 months of age.[2]

Twelve months represents the time in which breastfeeding provides the maximum benefit in terms of survival (excluding any consideration of HIV transmission). In the presence of ARV interventions to reduce the risk of HIV transmission, this combination would offer the best balance of protection from morbidity and mortality versus the risk of HIV transmission.[2]

HIV-free survival of HIV exposed infants who were breastfed beyond six months of age was better than, or not statistically different from, infants who were started on replacement feeds.[6] Infants given replacement feeds after a period of breastfeeding also suffered increased serious infections, including diarrhoea and pneumonia, growth faltering and death.[2, 22]

While complete avoidance of breastfeeding is a method to prevent the vertical transmission of HIV from mother-to-child beyond the perinatal period, a high prevalence of pre-mastication combined with concomitant oral lesions and blood-mixed pre-masticated food has been documented. This highlights another possible mode for HIV transmission.[23] Caregivers should be cautioned against pre-mastication, especially in communities in which HIV and hepatitis B are prevalent, and should seek care for their oral health conditions.

Based on substantial evidence it is recommended that national policy, interventions and programmes should be judged on their ability to promote HIV free survival in the whole population. Therefore all HIV-exposed infants and their mothers should be provided with a full package of child survival interventions to improve health and survival and not only services which focus on avoidance of HIV transmission.[24-26]

3 Improving country-level prevalence of exclusive breastfeeding

Other countries have increased their exclusive breastfeeding rates for infants 0-6 months, namely Benin 70%, Madagascar 67%, North Korea 65%, India 46% and Brazil 40% and this contributed significantly to reducing infant and under-five mortality.[3] Scientific evidence has been gathered on the effectiveness of a number of interventions to improve exclusive breastfeeding.

These include interventions to improve breastfeeding practices and to promote breastfeeding:

- Maternity care practices: Institutional changes in maternity care practices have been shown to effectively increase breastfeeding initiation and duration rates.[28-29]

- Infant and young child feeding counselling: Professional counsellors shown to be most effective in extending the duration of any breastfeeding.[11, 12, 18, 27]
- Infant and young child feeding support: Lay counsellors shown to be most effective in increasing the initiation and duration of exclusive breastfeeding.[12, 18, 27, 29-32]
- Community-based breastfeeding promotion and support: Various types of community-based breastfeeding promotion and support can improve breastfeeding practices in developing countries.[30-31]
- Media and social marketing: Media campaigns have been shown to improve attitudes towards breastfeeding and increase initiation rates.[27] Social marketing has been established as an effective behavioural change model for a wide variety of public health issues, including breastfeeding.[3]
- Support for breastfeeding in the work place: Evidence from industrialized countries has shown how work place support programmes increase the duration of breastfeeding.[3-4]

4 Situational Analysis

4.1 *Breastfeeding*

In South Africa, infant feeding practices are sub-optimal, with rates of breastfeeding, especially exclusive breastfeeding, remaining low over time despite a number of child health programmes and interventions.[33-35] Data from the 2003 South African Demographic and Health Survey (SADHS), and other studies show that although breastfeeding initiated early post-delivery is a common practice in South Africa, mixed feeding rather than exclusive breastfeeding is the norm. Approximately 70% of children are reported to have received complementary feeds before the age of six months.[11, 33-35]

The SADHS in 2003 found that only 11,9% of children aged 0 to 3 months were exclusively breastfed, and 20,1% of children age 0 to 3 months were not breastfed at all. To illustrate the lack of progress in improving the infant feeding rates, the 2003 SADHS[35] is compared to the rates of the 1998 SADHS[33] in **Table 1**.

Table 1: Infant feeding rates as reported in the 1998 and 2003 SADHS.

Breastfeeding Practices	1998 SADHS	2003 SADHS	2008 HSRC
Exclusive breastfeeding 0 – 3 months 4 – 6 months 0 – 6 months	10.4% 1%	11.9% 1.5%	8% 25.7%
Not breastfed 0 to 3 months	16.6%	20.1%	
	1998 SADHS	**2003 SADHS**	
Inappropriate complementary feeding practices (<6 months)/ mixed feeding	70%	Not reported	51.3%

The South African national HIV Prevalence, Incidence, Behaviour and Communication Survey, conducted by the HSRC in 2008, indicated that only 25.7% of children aged 0 to 6 months were exclusively breastfed. Of the children 0 to 6 months, 22.5% were exclusively formula fed, whilst 51.3% of the children in this age group were mix fed.[36]

Data from a large cohort study conducted in KwaZulu-Natal to assess HIV transmission and survival with exclusive breastfeeding compared with other types of infant feeding, achieved a 40% exclusive breastfeeding rate at 6 months. This study demonstrated that if HIV-positive women who chose to breastfeed receive adequate and sustained quality home based peer counselling visits, it is possible for them to practice exclusive breastfeeding.[22]

Health service practices play a key role in the establishment of breastfeeding. The BFHI review conducted in 2008 in 8 Provinces (excluding Western Cape) found that 73% mothers (n=493) reported that breastfeeding was initiated soon after delivery. However, by 10 weeks of age, almost half (46%) of the study population indicated they had given formula milk. Despite the high breastfeeding rates after BFHI implementation, the continuation of breastfeeding was still low. The most frequent reasons for the early introduction of other feeds were perceived milk insufficiency, the baby not wanting to breastfeed and advice by a family member or health worker.[37]

4.2 Formula feeding

The inclusion of provision of free infant formula for a period of 6 months in the previous PMTCT protocol has led to many women abstaining from all breastfeeding, shortening the optimal duration of breastfeeding, or mixed feeding. Since the National Breastfeeding Consultation Meeting in August 2011, the National Department of Health issued a national policy directive phasing out the distribution of free infant formula as part of the PMTCT strategy.[38]

Research from sites implementing PMTCT of HIV programmes found women opting for formula feeding despite not meeting the WHO AFASS (acceptable, feasible, affordable, sustainable and safe) conditions. This carries a greater risk of HIV transmission and/or death than breastfeeding.[39-41]

The 2003 South African Demographic and Health Survey found that access to piped water into a dwelling was 58% for urban residents and 11% for rural residents, 87% of urban residents and 56% of rural residents used electricity for cooking and 74% of urban residents and 5% of rural residents had a flush toilet.[35]

Another reason why mothers introduce infant formula is the perception of breastmilk insufficiency. It is also known that dried powdered infant formula (PIF) is not a sterile product and has been shown to contain several potential pathogens and if not prepared and handled correctly is a vehicle and source of infection in infants.[42-43]

A study that evaluated the efficacy of preparation controls implemented in kitchens or other preparation areas related to reconstituted infant formula, at eighteen public hospitals in South Africa, with respect to *Enterobacter (En.) sakazakii* and other potential pathogens found a few samples of powdered infant formula from sealed tins tested positive for potential pathogens, while the majority of samples which tested positive occurred only after preparation, implicating inadequate hygiene in feed preparation.[45]

Studies conducted on the preparation and use of infant formula in health facilities and at households reported that infants are often provided with bacterially contaminated infant formula that could contribute to increases in mortality and morbidity among both HIV uninfected and infected infants.[39, 44]

A small study in South Africa that assessed contamination of milk bottles at clinics and in the home found high levels of contamination with faecal bacteria (67% of clinic samples and 81% of home samples). The study also found evidence of poor formula preparation with over-dilution occurring among 28% of clinic samples and 47% of home samples.[46-47]

4.3 Complementary feeding

Studies on infant feeding showed that complementary feeding starts very early in South Africa, at an average age of two to three months of age. According to the DHS approximately 70% of children are reported to have received complementary feeds before the age of six months.[33] The BFHI review indicated the main reasons provided by mothers for the early introduction of complementary foods include the perceived inadequate production of breastmilk and the belief that breastmilk alone was not enough to satisfy the infant.[37]

Studies have also showed that the composition of complementary foods is inadequate. Soft maize meal porridge is the first solid food introduced and the most commonly used complementary food.[48]

The National Food Consumption Survey data (1999) showed that for children aged 1-9 years, the dietary intake of the following nutrients was less than 67% of the recommended dietary allowances: energy, calcium, iron, zinc, selenium, vitamin A, vitamin D, vitamin C, vitamin E, riboflavin, niacin and vitamin B6.[50] The poor breastfeeding rate, compounded by inappropriate complementary feeding practices, is a major concern because of the consequent stunting and risk of childhood mortality and morbidity.

Comparative data from the National Food Consumption Survey (NFCS)[48] and the 2005 National Food Consumption Survey- Fortification Baseline (NFCS-FB)[49] showed that malnutrition, including stunting, underweight for age, wasting, over nutrition (obesity) and vitamin A deficiency, remain significant public health problems in South Africa. The prevalence of these disorders, as reported by these surveys, is listed in **Table 2**.

Table 2: Nutritional status of children in South Africa in 2005

Indicator	Population of children	Prevalence (%) 1999 [47]	Prevalence (%) 2005 [48]	Comment
Stunting	12 to 108 months (1 to 9 years)	21.1%	18.0%	Younger children (1 to 3 years of age) remain the most severely affected as well as those living on commercial farms and in rural areas. The level of maternal education was an important determinant for these nutritional disorders.
Underweight	12 to 108 months (1 to 9 years)	10.35%	9.3%	
Wasting	12 to 108 months (1 to 9 years)	3.7%	4.5%	
Overweight in formal urban areas	12 to 108 months (1 to 9 years)	7.7%	4.8%	Prevalence was higher amongst children of well-educated mothers

A secondary analysis of the 1999 NFCS using the 2006 WHO reference standards showed a prevalence of stunting (20.1%) for the age category of 12 to 60 months. The analysis also classified 30% of the children as combined overweight and obese, leading the authors to conclude that overweight/obesity is a major nutritional problem facing South African children 12 to 60 months, with stunting following closely.[51]

5 Counselling and support

Counselling and support are needed if infant feeding practices are to be optimised. Optimal high quality counselling requires health care personnel to have accurate information, appropriate and relevant skills and a positive disposition towards breastfeeding.[3, 27] This is sadly not the case in South Africa's public health service.[11, 30] Data shows that exclusive breastfeeding is optimised when breastfeeding women receive consistent and accurate messages concerning appropriate infant feeding from health care personnel, family members at home, peer supporters and community members during antenatal, intra-partum, postnatal and follow-up care.[31, 32, 51]

A study conducted to assess breastfeeding knowledge amongst health workers in an area of high HIV prevalence revealed that health workers knowledge was outdated and not in line with the latest WHO recommendations at that time.[31] Poor breastfeeding and especially mix feeding with formula is as a result of the spill over effect into the general population, undermining breastfeeding promotion efforts.[44]

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Annexure 3: Global and National Initiatives on Infant and Young Child Feeding

As a member state of the WHO, and through the World Health Assembly (WHA), South Africa supports resolutions and strategies that encourage breastfeeding, recognising its importance to infant and young child nutrition, and in reducing infant mortality. Several resolutions have been adopted relating to infant and young child nutrition and appropriate feeding practices, namely:

- The International Code of Marketing of Breastmilk Substitutes (Code) was adopted by the World Health Assembly (WHA) Resolution 34.22 in 1981 and the subsequent relevant WHA resolutions.[79]
- The Innocenti Declaration in August 1990. This declaration called for governments to take concrete action by 1995 to protect, promote and support breastfeeding. This Declaration was reaffirmed and broadened by the 2005 Innocenti Declaration.[80]
- The Global Strategy for Infant and Young Child Feeding, unanimously adopted by all World Health Organisation (WHO) member states at the 55th WHA in May 2002.[81]

SA is a signature to the United Nations Convention on the Rights of the Child which was adopted in 1989 by the General Assembly of the United Nations. Article 24 of this Convention recognises that the child has the right to the enjoyment of the highest attainable standard of health. Parties are responsible for pursuing the full implementation of this right and, in particular, taking appropriate measures to *ensure that all segments of society, in particular parents and children, are informed, have access to education and are supported in the use of basic knowledge of child health and nutrition, the advantages of breastfeeding*..."[82]

The Baby Friendly Hospital Initiative (BFHI) launched globally by the WHO/UNICEF in 1991, and updated in 2009, is in recognition of the special role of maternity services in early support and protection of breastfeeding.[83]

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79 WHO. International Code on the Marketing of Breast-milk Substitutes. Geneva, 1981.
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83 WHO/UNICEF. Protecting, promoting and supporting breastfeeding: the special role of maternity services. WHO, Geneva, 1989. Revised, updated and expanded for integrated care 2009.

In September 2000, 189 countries including South Africa adopted the Millennium Declaration which was translated into the Millennium Development Goals (MDGs) to be achieved by 2015. Eight goals were set of which Goal 4 is aimed at the reduction of child mortality. This includes the reduction of the under-five mortality rate and the infant mortality rate by two-thirds between 1990 and 2015. Goal 1, which is the eradication of extreme poverty and hunger, uses the proportion of children under five years of age who are underweight as an indicator of prevalence.[84]

- A joint policy statement on HIV and Infant feeding was issued by WHO, UNICEF and the Joint United Nations Programme on HIV / AIDS (UNAIDS) in 1997, leading to the development of guidelines on HIV and infant feeding for decision-makers, programme managers and supervisors. This was supported by the Infant Feeding: Framework for Priority Action published in 2003 by WHO, UNICEF and other United Nations agencies. It recommends key actions related to infant and young child feeding, that cover the special circumstances associated with HIV and AIDS.[85]
- In 2006 the WHO's HIV and Infant Feeding Technical Consultation group released a consensus statement to refine the policy statements on HIV and infant feeding.[86]
- The joint UN Guidelines on HIV and Infant Feeding 2010, called on national or sub-national health authorities to select and make a decision on infant feeding practice i.e. breastfeeding with an antiretroviral intervention to reduce HIV transmission or avoidance of all breastfeeding, to be primarily promoted and supported by maternal and child health programmes as the public health strategy that will most likely give infants the greatest chance of HIV-free survival.[87]

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- The Integrated Management of Childhood Illness (IMCI) aims to reduce mortality from common childhood illnesses using the IMCI case management process, and by promoting improved child care and health-seeking behaviours at household and community levels.[88]
- South Africa released national Infant and Young Child Feeding Policy in 2007.[89]
- In 2010, the National Department of Health, South Africa released the 2nd edition of the Clinical Guidelines for the Prevention of Mother-to-Child Transmission (PMTCT)[90] and the 2nd edition of the Guidelines for the Management of HIV in Children.[91]
- In 2011, a National Breastfeeding Consultative Meeting concluded with the Tshwane Declaration which committed to and declared South Africa as a country that actively promotes, protects and support exclusive breastfeeding as a public health intervention to optimize child survival, regardless of the mothers HIV status.[92]
- Roadmap for Nutrition in South Africa 2013 to 2017.
- Strategic Plan for Maternal, Newborn, Child and Women's Health and Nutrition in South Africa, 2012-2016.[93]
- In 2012, the Campaign on Accelerated Reduction of Maternal and Child Mortality (CARMMA) was launched. This is an initiative of the African Union Commission (AUC) to promote and advocate for renewed and intensified implementation of the Maputo Plan of Action for Reduction of Maternal Mortality in Africa and for the attainment of MDG 5. Although the principal focus of CARMMA is maternal mortality, it also includes child mortality.[94]

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[94] DOH, South Africa's National Strategic Plan for a Campaign on Accelerated Reduction of Maternal and Child Mortality in Africa (CARMMA).

Annexure 4: The Tshwane Declaration of Support for Breastfeeding in South Africa

We, the participants of the National Breastfeeding Consultative Meeting, including Minister of Health, Deputy Minister of Health, MEC'S, DG's, HOD's, health managers and workers, experts, academics, traditional leaders and traditional health practitioners, NGOs, civil society, UNICEF and WHO, held at the St George Hotel, Gauteng on the 22nd and 23rd of August 2011.

Concerned that:

- Infant and child mortality rates in South Africa remain unacceptably high and the Millennium Development Goals (MDGs) target of reducing the rate of under five mortality by 2/3s may not be achieved;
- Breastfeeding rates in South Africa, and especially exclusive breastfeeding rates, remain very low;
- Breastfeeding practices have been undermined by aggressive promotion and marketing of formula feeds, social and cultural perceptions and the distribution of formula milk in the past to prevent Mother-to-child transmission (MTCT) of HIV;
- Formula feeding, which is very frequently practiced by mothers in South Africa, increases the risk of death from diarrhoea, pneumonia and malnutrition;

And noting that:

- Reducing child mortality is a priority of the Government of South Africa;
- Promoting, protecting and supporting breastfeeding will reduce child mortality and improve the health and development of young children and their mothers;
- Overwhelming scientific evidence demonstrates the benefits of exclusive breastfeeding and continued breastfeeding for all children, including those that are HIV exposed and HIV positive;
- WHO and other international agencies acknowledge the research evidence that anti-retroviral drugs very significantly reduce the risk of HIV transmission through breastfeeding and improve HIV free survival of HIV exposed infants. These data transform the landscape for decision making about infant feeding practices in the context of HIV;

- Promotion, protection and support of breastfeeding requires commitment and action from all stakeholders including government and legislators, community leaders, traditional leaders and traditional healers, civil society, health care workers and managers, researchers, private sector, employers, women's sector the media and every citizen;
- Government initiatives aim to achieve universal coverage of essential health services, including maternal, newborn and child health, through initiatives such as the introduction of the National Health Insurance System;
- The Primary Health Care Re-engineering initiative by government, provides an excellent opportunity to support breastfeeding through strengthening of the District Health System, the re-introduction of a school health programme, establishment of ward based health teams and experts;

And therefore commit ourselves and call on all stake-holders to support and strengthen efforts to promote breastfeeding. We specifically resolve:

- South Africa to declare itself as a country that actively promotes, protects and supports exclusive breastfeeding, and takes actions to demonstrate this commitment. This includes further mainstreaming of breastfeeding in all relevant policies, legislation, strategies and protocols;
- South Africa to adopt the 2010 WHO guidelines on HIV and Infant feeding and to recommend that all HIV infected mothers should breastfeed their infants and receive anti-retroviral drugs to prevent HIV transmission. Anti-retroviral drugs to prevent HIV through breastfeeding and to improve the health and survival of HIV infected mothers should be scaled up and sustained;
- National regulations on the Code on Marketing of Breastmilk substitutes to be finalised, adopted into legislation within twelve months, fully implemented and outcomes monitored;
- Resources to be committed by government and other relevant bilaterals, partners and funders, but excluding the formula industry, to promote, protect and support breastfeeding including updated guidelines on HIV and infant feeding;
- Legislation regarding maternity among working mothers to be reviewed in order to protect and extend maternity leave, and for measures to be implemented to ensure that all workers, including domestic and farm workers benefit from maternity protection, including enabling work place;

- Comprehensive services are provided to ensure that all mothers are supported to exclusively breastfeed their infants for six months and thereafter to give appropriate complementary foods and continue breastfeeding up to two years of age and beyond. Mothers with HIV should breastfeed for twelve months according to National guidelines. This will require skilled support by health workers at all levels of the public and private health services including hospitals, primary health care facilities and community based services;
- Human milk banks to be promoted and supported as an effective approach, especially in post natal wards and neonatal intensive care units, to reduce early neonatal and postnatal morbidity and mortality for babies who cannot breastfeed;
- Implementation of Baby Friendly Health Initiative (BFHI) and Kangaroo Mother Care (KMC) to be mandated such that:
  - All public hospitals and health facilities are BFHI accredited by 2015,
  - All private hospitals and health facilities are partnered to be BFHI accredited by 2015,
  - Communities are supported to be 'Baby Friendly';
- Community based interventions and support are implemented as part of the continuum of care with facility based services to promote, protect and support breastfeeding;
- Continued research, monitoring and evaluation should inform policy development and strengthen implementation;
- Formula feeds will no longer be provided at public health facilities with the following exceptions:
  - Nutritional supplements including formula feeds will be available on prescription by appropriate healthcare professionals for mothers, infants and children with approved medical conditions.

Annexure 5: Policy Directive for the Implementation of the South African Declaration on Support of Exclusive Breastfeeding and Revised Guidelines on Infant and Young Child Feeding

PURPOSE

To ensure smooth implementation of strategies aimed at promoting exclusive breastfeeding and the new recommendations on Infant and Young Child Feeding.

BACKGROUND

On August 22-23 2011, a National Breastfeeding Consultative Meeting concluded with the Tshwane Declaration (Annex 4) which committed to and declared South Africa as a country that actively promotes, protects and supports exclusive breastfeeding as a public health intervention to optimise child survival, irrespective of the mother's HIV status. South Africa therefore adopts the 2010 WHO guidelines on HIV and Infant feeding, and recommends that given the current profile of infant and young child mortality in South Africa, health services will principally counsel and support mothers known to be HIV infected to breastfeed exclusively their infants for six months with continued breastfeeding thereafter up to 12 months under antiretroviral cover. As per the Global strategy for Infants and Young Child Feeding HIV negative mothers and mothers of unknown HIV status should exclusively breastfeed their infants for six months with continued breastfeeding thereafter for up to two years and longer.

Facts:

Key points

1. Almost all mothers can breastfeed successfully.
2. South Africa has a low prevalence of exclusive breastfeeding, only at 8%;
3. As a public health intervention, breastfeeding gives infants a greatest chance of child survival, including HIV-free survival;
4. In the non HIV context there is a 6 to 10 fold increase in the possibility of death, from diarrhoea and pneumonia, in non-breastfed infants within the first six months of life compared to those that were exclusively breastfed;
5. In many populations (rural Zambia, North America, urban and rural South Africa) there is unequivocal evidence that exclusive breastfeeding and continued breastfeeding thereafter reduces serious morbidity and mortality, and improves development of infants;
6. The order of magnitude of reduction of serious illnesses and mortality will depend on the background infant mortality rate, but in all settings there will be benefits associated with breastfeeding;

7. Even in resource-rich settings such as North America, exclusive breastfeeding reduces mortality in addition to providing other health benefits;
8. The risk of HIV infection through breastfeeding is generally overstated. Even in the absence of ARVs, about 60% of breastfed infants born to HIV infected mothers are HIV-negative after 18-24 months of breastfeeding;
9. With ARVs, 98% of infants breastfed by HIV infected mothers for 12 months are unlikely to be infected with HIV (assuming good adherence with ARVs).
10. The risk of sickness and death through formula feeding is understated and not communicated to mothers whether HIV infected or not; (whereas risk of HIV infection through breastfeeding is always presented). Non-breastfeeding infants have an approximately 6 to 10 fold higher risk of dying during infancy compared to breastfed infants.
11. Breastfeeding of infants already infected with HIV through pregnancy and delivery, even in the absence of lifelong ARVs, protects them against diarrhoea and pneumonia, delays progression to AIDS and prolongs their lives.
12. The majority of women in South Africa practice mixed feeding, either breastfeeding plus solids, or formula plus solids. The 2008, HSRC survey indicated that 51% of children 0-6 months were mixed fed. Mixed feeding may potentially damage the lining of the babies' intestines, thus increasing the risk of HIV transmission.
13. The inclusion of provision of infant formula in PMTCT protocols has led to many women practising mixed feeding or abstaining from all breastfeeding. This has contributed to mortality among both uninfected and infected infants.
14. Other countries have increased their exclusive breastfeeding rates for the first 6 months of life, namely Benin 70%, Madagascar 67%, North Korea 65%, India 46% and Brazil 40% and this contributed significantly to reduced infant and under 5 mortality rates.

Implementation

The Department of Health is currently in the process of developing an action plan for the implementation of the Tshwane Declaration of support for Breastfeeding in South Africa that will include alignment of all child health policies with the new recommendations on infant and young child feeding and capacity building of health workers. A technical task team has been formed to provide guidance on how health workers will be trained on the new approach; how support to mothers should be provided, how breastfeeding will be promoted and how the programme will be monitored. However, the following immediate actions can be taken:

In all health facilities breastfeeding will be promoted and presented as the best feeding practice for all women. Special circumstances as listed below will be considered.

- The issuing of free infant formula should be stopped in a phased out process, from **1 April 2012** i.e***. from this date onwards no new mothers with newborns should be issued with free infant formula.***
- Mothers currently on the PMTCT programme with infants born in this financial year, who have opted to Exclusively Formula Feed their infants, will continue receiving infant formula until their infants are six months old.
- Distribution of formula ***will not be extended beyond 30 September 2012.***
- This means that by **30 September 2012**, all facilities would have completely stopped the routine supply of free infant formula.

  Mothers on the PMTCT programme who may still choose to exclusively formula feed after counseling should then be educated and given information on a suitable formula to purchase and how to safely prepare formula since the Department would no longer provide free formula. Women who choose not to breastfeed should be sure that they can replacement feed safely and consistently to ensure their child's health and survival. *The following specific conditions should be met:*

  - The mother or other caregiver can reliably provide sufficient infant formula milk to support normal growth and development of the infant.
  - Safe water and sanitation are assured at the household level and in the community.
  - The mother or caregiver can prepare it cleanly and frequently enough so that it is safe and carries a low risk of diarrhoea and malnutrition; and
  - The mother or caregiver can, in the first six months, exclusively give infant formula milk, and
  - The family is supportive of this practice, and
  - The mother or caregiver can access health care that offers comprehensive child health services.
- Infants of HIV-infected women not on lifelong antiretroviral therapy who choose to breastfeed, must be given Infant nevirapine (NVP) daily to reduce HIV transmission through breastfeeding as per the National PMTCT protocol.

- HIV-infected women, who are breastfeeding should breastfeed exclusively for the first 6 months of life, introducing appropriate complementary foods thereafter, and continuing to breastfeed up to age of 12 months.
- Abrupt cessation of breastfeeding is not recommended, breastfeeding should be stopped gradually over one month, and ARV treatment should continue for one week after breastfeeding is fully stopped.
- When HIV-infected mothers stop breastfeeding, families should provide infants with safe and adequate replacement feeds to enable normal growth and development.
- Breastfeeding beyond 12 months of age for women with HIV is not recommended.
- Mothers of infants and young children known to be HIV-infected, are strongly encouraged to exclusively breastfeed for the first six months of life and continue breastfeeding as per the recommendations for the general population that is up to two years or beyond. No nevirapine prophylaxis is needed. The infant should be on ARVs.
- Public health authorities must ensure that at all times ARV interventions are consistently available.
- All health workers in public health facilities must promote and support pregnant women with HIV to exclusively breastfeed and use ARV interventions (maternal ART for those who are eligible, or continued infant nevirapine).
- Public health facilities will henceforth only provide infant formula for infants and young children who meet the specified criteria or have specific medical conditions that makes it not possible for the mother to breastfeed. Infant formula for older infants and young children will be provided as part of the supplementation programme.
- A plan to scale up and regulate breastmilk banks will be developed in consultation with Provinces.
- Almost all mothers can breastfeed successfully. Nevertheless, in a small number of cases it may be justified to recommend that the mother does not breastfeed temporarily or permanently. These conditions, which concern very few mothers and their infants, are listed below together with some health conditions of the mother:

Infants who qualify to receive specialized infant formula are:

- Infants with maple syrup urine disease: a special formula free of leucine, isoleucine and valine is needed.
- **Infants** with **classic** galactosaemia: a special galactose-free formula is needed.
- Infants with phenylketonuria: a special phenylalanine-free formula is needed.

Maternal medical condition that may justify temporary or permanent avoidance of breastfeeding

- Severe illness that prevents a mother from caring for her infant, for example sepsis, renal failure
- Herpes simplex virus type 1 (HSV-1) direct contact between lesions on the mother's breasts and the infant's mouth should be avoided until all active lesions have resolved.
- Maternal medications: sedating psychotherapeutic drugs, anti-epileptic drugs and opioids and their combinations may cause side effects such as drowsiness and respiratory depression, radioactive iodine -131, excessive use of topical iodine or iodophors (especially on open wounds or mucous membranes), cytotoxic chemotherapy.

Infants who qualify to receive infant formula as part of the supplementation scheme

- The mother has died or infant has been abandoned.
- Other individual unique medical circumstances that may be deemed necessary by the health multidisciplinary team.

Note: *This policy directive should be implemented in conjunction with the Nutrition supplementation guide.*

Recommendation

It is recommended that the contents of these Infant and Young Child Feeding guidelines be brought to the attention of all health facilities for implementation.

Annexure 6: The Revised MBFHI Tool 2009

"The Ten Steps" interpreted *(or adapted)* for settings with high HIV prevalence[95,96]

Different / additional criteria used in the revised BFHI tool than that from the previous tool:

Step 1:

Have a written policy on infant feeding that is routinely communicated to all health care staff.

Step 2:

Train all health care staff in skills necessary to implement this policy.

Step 3:

Inform all pregnant women about the benefits and management breastfeeding.

Step 4:

Place babies in skin-to-skin contact with their mothers immediately following birth for at least an hour.

(Encourage mothers who have chosen to breastfeed to recognize when their babies are ready to breastfeed, offering help if needed.)

Step 5:

- Show mothers how to breastfeed, and how to maintain lactation even if they should be separated from their infants.
- Show mothers, who have decided after counselling to replacement feed, how to prepare and give feeds, as well as how to maintain optimal feeding practices and breast health.

Step 6:

Give newborn infants no food or drink other than breastmilk unless medically indicated, and encourage exclusive breastfeeding for 6 months.

Step 7:

Practice rooming-in – allow mothers and infants to remain together – 24 hours a day.

Step 8:

Encourage breastfeeding on demand.

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[95] WHO; Evidence for the ten steps to successful breastfeeding, Geneva, 1998.
[96] WHO/UNICEF, BFHI 2009.

Step 9:

Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants. *(This step applies to non-breastfeeding babies as well.)*

Step 10:

Foster the establishment of **infant feeding support groups** and refer mothers to them on discharge from the hospital or clinic.

Item 1:

Comply with the International Code of Breasmilk Subsitutes and relevant WHA resolutions.

Item 2:

Provide guidance and support to women related to HIV and Infant feeding.

Item 3:

Practice mother friendly labour and delivery care for successful breastfeeding.

Annexure 7: Definitions

Anthropometric measurements

When height, length, weight, arm circumference, skin fold thickness or other body measurements are made on any human being they are called anthropometric measurements. Such measurements are often expressed in ratios of one to another e.g. weight-for-height. These measurements, when compared to national or international norms for healthy groups of people for that particular age and sex, are referred to as assessment of nutritional status.

Breastmilk substitute

Any food or drink marketed or otherwise representing a partial or total replacement of breastmilk, whether or not suitable for that purpose.

Children in especially or exceptionally difficult circumstances

This refers to the following groups:

- Low birthweight or premature infants.
- Hospitalised infants and young children.
- Severe Acute Malnutrition (SAM) in infants and young children.
- Infants and young children who are orphaned and or abandoned.
- Infants and young children with mothers who have physical or mental disabilities
- Infants and young children suffering the consequences of emergencies, including natural or human-induced disasters such as floods, drought and earthquakes
- Infants and young children with inborn errors of metabolism.

Commercial formula

Commercial formula refers to a commercial product formulated industrially in accordance with the appropriate Codex Alimentarius standards for infant formula, follow-up formula and infant formula for special dietary management for infants with specific medical conditions.

Complementary foods

Complementary foods means any foodstuff, whether in liquid, solid or semi-solid form, given to an infant after the age of 6 months as part of the transitional process during which an infant learns to eat food appropriate for his or her developmental stage while continuing to breastfed or fed with commercial formula.

Cup feeding

The act of feeding an infant or child using a cup, regardless of what the cup contains. The cup used should an open rimmed cup (without a spout or straw).

Exclusive breastfeeding or exclusive breastmilk feeding

An infant receives only breastmilk and no other liquids or solids, not even water, with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines. When expressed milk is given, the preferred term is breastmilk feeding.

Growth faltering

Child's failure to gain adequate weight between 3 serial weighings, at least one month apart.

Growth monitoring and promotion

The regular measurement, recording and interpretation of a child's growth in order to counsel, act and follow-up results with the purpose of promoting child health, human development and quality of life.

Health care personnel

This includes all health care providers and health workers.

Health care provider

Any person providing health services in terms of any law, including in terms of the:

- Allied Health Professions Act, 1982 (Act No.63 of 1982)
- Health Professions Act, 1974 (Act No. 56 of 1974)
- Nursing Act, 1978 (Act No. 53 of 1974)
- Pharmacy Act, 1974 (Act No. 53 of 1974) and
- Dental Technicians Act, 1978 (Act No. 19 of 1979)

Health facilities include:

Clinics: This is a unit which normally functions only on weekdays during working hours. Antenatal care is one of the number of activities in the clinic, the other being, child health, family planning etc.

Community Health Centres: This is a 24 hour comprehensive obstetric unit run by midwives. Where it stands alone as a maternity service, it might be called a midwife obstetric

unit (MOU). More often, the maternity section will run alongside other services such as emergency care, minor ailments, chronic diseases, and promotive services.
Hospitals: this maybe a district hospital (level 1), regional hospital (level 2) or tertiary hospital (level 3).

Health worker
Any person who is involved in the provision of health services to a user, but does not include a health care provider. This includes lay counsellors.

HIV-negative
Refers to people who have taken an HIV test with a negative result and who know their result.

HIV-positive
Refers to people who have taken an HIV test whose results have been confirmed positive and who know their result

HIV status unknown
Refers to people who have not taken an HIV test or who do not know the result of their test.

Infant
A person from birth to 12 months of age.

Infant formula
Means a formulated product specially manufactured in accordance with the applicable Codex standard to satisfy, by itself, the nutritional requirements of infants during the first months of life up to the introduction of appropriate complementary foods.

Integrated Nutrition Programme
A programme primarily implemented through the Department of Health aimed at specific target groups, which combines some direct with indirect nutrition interventions to prevent malnutrition.

Low birth weight
Birth weight of less than 2 500 grams.

Malnutrition

Malnutrition is an impairment of health resulting from a deficiency, excess or imbalance of nutrients. It includes over-nutrition, which is excess of one or more nutrients, usually of energy, and under-nutrition, which refers to a deficiency of energy and / or one or more essential nutrients.

Micronutrients

Micronutrients are natural substances found in small amounts in food (vitamins and minerals) as compared with macronutrients (e.g. protein, fats and carbohydrates), which are found in larger amounts.

Micronutrient malnutrition

A term used to refer to diseases caused by a deficiency of vitamins or minerals.

Mixed feeding

Feeding breastmilk as well as other milks (including commercial formula or home –prepared milk), foods or liquids.

Mother-to-child transmission

Transmission of HIV from an HIV-positive woman, during pregnancy, delivery or breastfeeding, to her infant. The term is used because the immediate source of the infection is the mother, and does not imply blame on the mother.

Nutrients

A chemical substance obtained from food and needed by the body for growth, maintenance, or repair of tissues. There are six known groups of nutrients: carbohydrates, protein, fat, vitamins, minerals – including electrolytes and trace elements - and water.

Nutritional status

The nutritional status of a person as determined by anthropometric measures (height, weight, circumference etc.), biochemical measures of nutrients, or their by-products in blood and urine, a physical (clinical) examination and a dietary assessment and analysis.

Nutritional supplements

Food- and / or nutrient supplements given in addition to food available at home.

Obesity

An excess of body fat frequently resulting in significant impairment of health, usually associated with a high body mass index (BMI).

Regulations

Means the Regulations Relating to Foodstuffs for Infants and Young Children (R991) under the Foodstuffs Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972).

Replacement feeding

Feeding infants who are receiving no breastmilk, with a diet that provides adequate nutrients until the age at which they can be fully fed family foods. During the first 6 months of life, replacement feeding should be with a suitable commercial formula. After 6 months complementary foods should be introduced.

Responsive or Active feeding

Responsive feeding applies psycho-social care and includes the following:

- Feeding infants directly and assisting older children when they feed themselves, being sensitive to their hunger and satiety cues;
- Feeding slowly and patiently, and encouraging children to eat, but not forcing them.
- If children refuse many foods, experiment with different food combinations, tastes, textures and methods of encouragement
- Minimising distractions during meals if the child loses interest easily; and
- Talking to children during feeding, with eye to eye contact. Feeding times are periods of learning and loving.

Severe Acute Malnutrition

Severe acute malnutrition (SAM) is defined as any one of the following:

- Weight-for-height or -length below minus 3 standard deviations (SD) (z-score < -3SD)
- mid upper arm circumference (MUAC) of less than 11.5 cm in children aged 6-60 months (circumference of child's left upper arm),
- the presence of bilateral pitting pedal oedema.

Spill-over

This means that mothers who would otherwise breastfeed lose their confidence and needlessly start to give infant formula feeds.

Stunting

Indicates past chronic under-nutrition. Height-for-age z-scores below -2 standard deviations of the reference population.

The Code

The International Code of Marketing of Breastmilk Substitutes was adopted as an annex to the 1981 WHA Resolution 34.22 and includes subsequent relevant WHA Resolutions.

Under-nutrition

Too little food or nutrition in the diet resulting in immediate and / or long term adverse consequences on health status and / or physical and mental development

Underweight

A child is underweight when his/her weight falls below 80% expected weight-for-age.

Wasting

An acute, short-duration episode of malnutrition where weight for height z-scores are below 2 standard deviations of the reference population.

Young child

In this context, means a person older than 12 months but younger than 5 years (60 months).

Department of Health – 2013
ISBN: 978-1-920031-74-9
www.doh.gov.za