HIV AND NUTRITION
Verona E. Witbooi

15 August 2016
Abbreviations and Acronyms

INP- Integrated Nutrition Programme
HAST- HIV/ Aids, Sexually transmitted infections and Tuberculosis
NTP- Nutrition Therapeutic Programme
TF- Tube Feed Programme
BMI- Body Mass Index
NCD- Non Communicable Disease
MBFI- Mother Baby Friendly Initiative
PMTCT- Prevention of Mother to Child Transmission
HCT- HIV Counselling and Testing
ARV- Antiretroviral Therapy
Contents of the Presentation

- Nutrition Service Priorities
- INP Landscape
- Impact of Nutrition on HIV infected individuals
- Programming and Services
- Goals of Nutritional Support
Nutrition Services
The Integrated Nutrition programme is placed in the structure of the Department of Health under the Division District Health Services and Programmes within the Directorate Comprehensive health programmes, Sub programme 2.7.

The purpose of this programme is to render a nutrition service aimed at specific target groups, combining direct and indirect nutrition interventions to address malnutrition. Nutrition Priorities include the following:

- Behaviour Change interventions such as breastfeeding promotion, complementary feeding and healthy eating.
- Micronutrient programmes
- Therapeutic feeding

The Nutrition Programme is integrated in the service package at all levels of care. The services focus itself to the specific needs throughout the lifecycle. It is central to the holistic and comprehensive management of conditions such as HIV, Aids, TB and other chronic and debilitating conditions.

To address underlying issues which contribute to malnutrition the Programme liaises with other Departments, Sectors and Programmes to reduce or eliminate the causal/contributing factors.
KEY PERFORMANCE AREAS OF THE INTEGRATED NUTRITION PROGRAMME

1. Health Facility Based Support Services
2. Integrated within community outreach projects
3. Training of staff on nutrition
4. Planning, reporting & monitoring
Situation Analysis: HIV and Nutrition in the Western Cape context
### Anthropometric Indicators – Stunting in Children Aged 0-14 Years, 2012

#### Western Cape
- **Males**: Stunted (HAZ <-2 SD) - 17.5%
- **Females**: Stunted (HAZ <-2 SD) - 13.9%
- **Males**: Severely Stunted (HAZ <-3 SD) - 3.8%
- **Females**: Severely Stunted (HAZ <-3 SD) - 3.0%

#### South Africa
- **Males**: Stunted (HAZ <-2 SD) - 16.7%
- **Females**: Stunted (HAZ <-2 SD) - 13.7%
- **Males**: Severely Stunted (HAZ <-3 SD) - 3.9%
- **Females**: Severely Stunted (HAZ <-3 SD) - 3.6%

**Western Cape**
(M: n=318; F: =300)

**South Africa**
(M: n= 2123; F: n=2155)
Anthropometric Indicators – Wasting in Children Aged 0-14 Years, 2012

Western Cape  
(M: n=318; F: =300)  
- Wasted: 2.0%  
- Severely Wasted: 0.1%

South Africa  
(M: n= 2123; F: n=2155)  
- Wasted: 3.8%  
- Severely Wasted: 1.0%
## Anthropometric Indicators – Underweight in Children Aged 0-14 Years, 2012

<table>
<thead>
<tr>
<th></th>
<th>Western Cape</th>
<th>South Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(M: n=318; F: n=300)</td>
<td>(M: n=2123; F: n=2155)</td>
</tr>
<tr>
<td>Underweight (WAZ &lt;-2 SD)</td>
<td>7.2%</td>
<td>7.4%</td>
</tr>
<tr>
<td>Severely Underweight (WAZ &lt;-3 SD)</td>
<td>1.0%</td>
<td>1.4%</td>
</tr>
</tbody>
</table>
**Anthropometric Indicators – BMI in Male Adults Aged 15+ Years, 2012**

- **Western Cape (M: n=412)**
  - Underweight <18.5: 8.1%
  - Normal 18.5-24.9: 48.9%
  - Overweight 25-29.9: 26.9%
  - Obese 30+: 16.1%

- **South Africa (M: n=2 572)**
  - Underweight <18.5: 12.8%
  - Normal 18.5-24.9: 56.4%
  - Overweight 25-29.9: 20.1%
  - Obese 30+: 10.6%

**Mean BMI Males - W Cape : 25.0, SA : 23.6**
Anthropometric Indicators – BMI in WC Female Adults Aged 15+ Years, 2003 & 2012

Anthropometric Indicators – Percentage of Overweight and Obesity in WC Adults Aged 15+ Years, 2012

Males (n=412) - 43%
Females (n=740) - 62%
Anthropometric Indicators – Waist Circumference in WC Adults Aged 15+ Years to Determine Risk for Metabolic Complications, 2003, 2012

Mean Waist Circumference Males – 2003: 80.5cm, 2013: 84.6cm
Mean Waist Circumference Females – 2003: 82.8cm, 2013: 89.0cm
2013 SANHANES-1 DATA

Anthropometric Indicators – Take Away Points

• Western Cape population getting bigger over time
  • Increase in BMI
  • Increase in Waist Circumference
  • Increase in percentage exceeding recommended Waist-Hip Ratio
### 2013 SANHANES-1 DATA

**Nutritional Status – Percentages of Vitamin A Deficiency & Anaemia in Children (<5 Years), Females (Vit A 16-35 Years, Anaemia 15+ Years) and Males (15+ Years), 2012**

<table>
<thead>
<tr>
<th></th>
<th>Western Cape</th>
<th>South Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Children</strong></td>
<td>43.6%</td>
<td>43.6%</td>
</tr>
<tr>
<td>Vitamin A Deficient (&lt;0.7 µmol/L)</td>
<td>7.1%</td>
<td>13.3%</td>
</tr>
<tr>
<td><strong>Anaemia Detected (Hb &lt;13g/dL)</strong></td>
<td>5.6%</td>
<td>12.2%</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td>15.1%</td>
<td>22.0%</td>
</tr>
<tr>
<td><strong>Males</strong></td>
<td>5.6%</td>
<td>12.2%</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td>15.1%</td>
<td>22.0%</td>
</tr>
</tbody>
</table>

Children – WC n=109, SA n=436; Males: WC n=359, SA n=1889; Females – Vit A: WC n=264, SA n=1155; Anaemia: WC n=620, SA n=3299
**2013 SANHANES-1 DATA**

**Dietary Intake – Dietary Diversity Score (0-9) Among Participants Aged 15+ Years, 2012**

Mean Score: Western Cape=4.6, South Africa=4.2

<table>
<thead>
<tr>
<th>Percentage Scoring &lt;4</th>
<th>Western Cape (n=2038)</th>
<th>South Africa (n=13357)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45.0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Nutrition Knowledge & Behaviour – Mean Scores on Nutrition Knowledge Questionnaires for Children Aged 10-14 Years, 2012

<table>
<thead>
<tr>
<th></th>
<th>General Knowledge Score: 0-6</th>
<th>Identification of Healthy Alternatives Score: 0-7</th>
<th>Identification of Healthy Fats Score: 0-10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Cape (n=307)</td>
<td>1.9</td>
<td>5.1</td>
<td>5.79</td>
</tr>
<tr>
<td>South Africa (n=2578)</td>
<td>1.8</td>
<td>5.1</td>
<td>5.38</td>
</tr>
</tbody>
</table>
## 2013 SANHANES-1 DATA

### Nutrition Knowledge & Behaviour – Nutrition Knowledge (e.g., Fruit, Sugar, Fat, Fibre) By Score Category Among Participants Aged 15+ Years, 2012

<table>
<thead>
<tr>
<th></th>
<th>Western Cape (n=2077)</th>
<th>South Africa (n=14737)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low (0-3)</td>
<td>9.3%</td>
<td>14.5%</td>
</tr>
<tr>
<td>Medium (4-6)</td>
<td>54.9%</td>
<td>62.9%</td>
</tr>
<tr>
<td>High (7-9)</td>
<td>35.7%</td>
<td>22.6%</td>
</tr>
</tbody>
</table>

Mean Score: Western Cape=5.78, South Africa=5.26
## 2013 SANHANES-1 DATA

### Nutrition Knowledge & Behaviour – Factors Influencing Grocery Shopping Among Western Cape Participants Aged 15+ Years, 2012

<table>
<thead>
<tr>
<th>Factor</th>
<th>Male (%) (n=907)</th>
<th>Female (%) (n=1235)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>32.3</td>
<td>65.4</td>
</tr>
<tr>
<td>Hygienic safety</td>
<td>6.0</td>
<td>10.6</td>
</tr>
<tr>
<td>Taste</td>
<td>10.2</td>
<td>19.7</td>
</tr>
<tr>
<td>Convenience</td>
<td>6.4</td>
<td>6.9</td>
</tr>
<tr>
<td>Nutrient content</td>
<td>8.3</td>
<td>15.4</td>
</tr>
<tr>
<td>How well and how long it keeps</td>
<td>5.8</td>
<td>15.4</td>
</tr>
<tr>
<td>Ease of preparation</td>
<td>3.8</td>
<td>5.7</td>
</tr>
<tr>
<td>Health considerations</td>
<td>7.6</td>
<td>19.3</td>
</tr>
<tr>
<td>Didn’t do grocery shopping</td>
<td>62.2</td>
<td>26.3</td>
</tr>
</tbody>
</table>
2013 SANHANES-1 DATA

Take Away Points

- Higher than average levels of NCDs reported in the Western Cape
- Lower levels of vitamin A deficiency and anaemia detected
- General nutritional knowledge and intake of Western Cape better than average
- A minority consider health and nutrient content when food shopping
Where does Nutrition Meets HAST Programme?
Nutrition Throughout the Lifecycle

DELIVERY

POST NATAL

PREGNANCY
ANC
FEEDING
COUNSELLING
MBFI

ADULT HEALTH

CHILD HEALTH

ART / NTP

ART / NVP/IYCF

Prophylactic ART

HCT

Complementary Feeding
## Relevant Policies and Circulars

<table>
<thead>
<tr>
<th>Circular/ Policy Number</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>H57/ 2015</td>
<td>PHASE-OUT OF SUBSIDIZED INFANT FORMULA (PMTCT PROGRAMME)</td>
</tr>
<tr>
<td>H84/2013</td>
<td>STANDARDIZATION OF MOTHER AND BABY FRIENDLY INITIATIVE (MBFI)</td>
</tr>
<tr>
<td>H155/2013</td>
<td>SEVERE ACUTE MALNUTRITION (SAM)</td>
</tr>
<tr>
<td>R991</td>
<td>IMPLEMENTATION AND MONITORING OF REGULATIONS 991 RELATING TO FOODSTUFF FOR INFANTS AND YOUNG CHILDREN (SA CODE OF MARKETING OF BREASTMILK SUBSTITUTES (CODE)) AND STANDARD OPERATING PROCEDURE</td>
</tr>
<tr>
<td>H117/2012</td>
<td>ADMINISTRATION OF VITAMIN A BY COMMUNITY HEALTH WORKERS, DIETITIANS AND NUTRITIONISTS</td>
</tr>
<tr>
<td>H131/2012</td>
<td>TARGETED FEEDING PROGRAMME 2012/2013 &amp; FOOD SECURITY</td>
</tr>
<tr>
<td>H164/2012</td>
<td>WESTERN CAPE POLICY FRAMEWORK AND IMPLEMENTATION PLAN FOR BREASTFEEDING RESTORATION</td>
</tr>
<tr>
<td>H165/2012</td>
<td>STANDARD OPERATING PROCEDURE FOR GROWTH MONITORING AND PROMOTION</td>
</tr>
<tr>
<td>H166/2012</td>
<td>INFANT FEEDING COUNSELLING GUIDELINE</td>
</tr>
<tr>
<td>H01/2011</td>
<td>IMPLEMENTATION OF THE REDISIGNED ROAD TO HEALTH BOOKLET (rthb)</td>
</tr>
<tr>
<td>H03/2011</td>
<td>VITAMIN A SUPPLEMENTATION IN PROVINCIAL HEALTH FACILITIES OF THE WESTERN CAPE PROVINCE</td>
</tr>
<tr>
<td>H80/2011</td>
<td>REVIEWED IMPLEMENTATION GUIDELINE FOR THE NUTRITION THERAPEUTIC PROGRAMME (NTP)</td>
</tr>
<tr>
<td>H48/2010</td>
<td>ROLL OUT AND IMPLEMENTATION OF THE REDISIGNED ROAD TO HEALTH BOOKLET (rthb)</td>
</tr>
</tbody>
</table>
What is the role of Nutrition in HIV?
Fig. 4. Relationship between HIV and malnutrition

Source: De Pee S, Semba RD (38).
Guidelines for optimal impact of Supplementation

**Characteristics of food supplement:**
- Content of supplement
- Nutrients: macro- and micronutrients, protein quality, essential amino acids, essential fatty acids
- Anti-nutrients
- Energy density
- Amount provided per day
- Form of the food (palatability, preparation required)
- Ingredients
- Packaging
- Setting in which the food is provided (clinic, community)

**Starting point of patients and context:**
- Baseline nutritional status
- Target group (children, women, men, etc.)
- Food security situation
- Basic diet to which food supplement is added
- HIV-disease stage

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**Impact of food intervention on malnutrition and HIV disease (mortality, viral load, CD4 count)**

**Treatment adherence and progression of HIV disease during the study period**

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**Fig. 5. Factors affecting the impact of food support interventions on malnutrition and HIV disease outcome**

Source: De Pee S, Semba RD (38).
Nutrition and HIV

Good nutrition can improve outcomes, by strengthening the immune system to resist opportunistic infections.

Nutrition and healthy living work together with ARV’s to slow the progression of HIV.
Guidelines for Healthy Eating

• Enjoy a variety of foods
• Make starchy food part of most meals
• Fish, chicken, lean meat or eggs could be eaten daily
• Have milk, maas or yoghurt every day
• Eat plenty of vegetables and fruit every day
• Eat dry beans, split peas, lentils and soya regularly
• Use salt and food high in salt sparingly
• Use fat sparingly; choose vegetable oils rather than hard fats
• Use sugar and food and drinks high in sugar sparingly
• Drink lots of clean safe water
• Be Active!
Department of Health Policies

**Disease Specific Nutrition and Targeted Feeding**

- **2007**
  - NSP Policy (category, products and register)

- **2010**
  - Procurement Guidelines for Supplements

- **2011**
  - Reviewed NTP implementation Guidelines

- **2011**
  - Procurement and Provisioning Guidelines

- **2012**
  - Targeted Feeding Circular (Co-written by DSD)

- **2015**
  - Review of the NTP Policy
### Recommendations for Infants and Young Children (Source IYCF 2013)

<table>
<thead>
<tr>
<th>Status of HIV + Mother</th>
<th>Duration of Breastfeeding</th>
<th>Introduce Adequate, Safe and Appropriate Complementary Foods at 6 Months</th>
<th>Breastfeeding Cessation</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV negative women</td>
<td>2 years or longer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIV + mothers on lifelong ART, infant HIV – or unknown status</td>
<td>12 months</td>
<td>Continue breastfeeding for 12 months. Infant should receive ARV from birth until 6 weeks of age in accordance with PMTCT guidelines</td>
<td>Abrupt cessation is discouraged</td>
</tr>
<tr>
<td>HIV + mothers not on lifelong ART, infant HIV – or unknown status</td>
<td>Continue breastfeeding for 12 months. Mother and or infant should receive ART, in accordance with PMTCT guidelines, until 1 week after breastfeeding stops</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIV + mother, infant HIV +</td>
<td>Continue breastfeeding for 2 years or longer</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Provincial Antenatal Education checklist

## Table 1: Topics for education and when to share and reinforce them

<table>
<thead>
<tr>
<th>TOPIC</th>
<th>Antenatal</th>
<th>Intrapartum / postnatal</th>
<th>After discharge from the birthing unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the Mother Baby Friendly Initiative?</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Importance of breastfeeding for the baby, mother and community.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>BREASTFEEDING MANAGEMENT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Importance of skin-to-skin contact</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Feeding cues</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>• Importance of rooming-in</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>• Importance of on demand or baby-led feeding</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>• How to ensure enough breast milk</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>• Positioning and attachment</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>• Importance of exclusive breastfeeding for 6 months</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>• Continuation of breastfeeding after 6 months with complementary feeding</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>• Dangers of teats/bottles</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>• How to express breast milk</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>• Cup Feeding</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>• Risks of not breastfeeding</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HIV &amp; Infant Feeding</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Routes of passing on HIV infection from mothers to their infants</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>• Importance of testing and counseling for HIV.</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>• Informed infant feeding choices</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Code for the Marketing of Breast Milk Substitutes</strong></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mother Friendly Care</strong></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mental Health</strong></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Infant Feeding Counselling Record

Step 1: Explain infant feeding options
- I have explained the advantages and disadvantages of breastfeeding.
- I have explained the advantages and disadvantages of formula feeding.

Ask the mother what her preferred feeding choice is:  [ ] Breastfeeding  [ ] Formula feeding

Step 2: Assess appropriateness of feeding choice
[Appropriate choice: Breastfeeding if answer to ANY question is No/Doubtfull; Formula feeding if answer to ALL six questions is Yes]

Questions
1. Do you have piped running water and a flush toilet in your home?  [ ] Yes  [ ] No/Doubtfull
2. Can you afford to formula feed your baby for 12 months without assistance from the government?  [ ] Yes  [ ] No/Doubtfull
3. Can you prepare formula hygienically on demand for your infant throughout the day and night?  [ ] Yes  [ ] No/Doubtfull
4. Are you sure you won’t give breast milk as well as formula milk during the first six months?  [ ] Yes  [ ] No/Doubtfull
5. Have you disclosed your status to your partner or someone in your household?  [ ] Yes  [ ] No/Doubtfull
6. Is the nearest health care service easily accessible?  [ ] Yes  [ ] No/Doubtfull

Ask the mother what her feeding choice is:  [ ] Breastfeeding  [ ] Formula feeding

Step 3: Explore reasons if inappropriate choice is made (only applicable if appropriate choice based on Step 2 differs from the mother’s choice):  [ ] I have asked the client what the reasons are for her choice.
[ ] I identified the obstacles for the inappropriate choice.
[ ] I discussed ways to overcome obstacles.

Ask the mother what her final feeding choice is:  [ ] Breastfeeding  [ ] Formula feeding

Step 4: Sensitize mother / guardian to pages 7 and 8 of the Road-to-Health booklet
- I have explained the importance of these pages to the mother.

Step 5: Demonstrate chosen feeding option

If Breastfeeding
- Session 1:  [ ] Facts about breastfeeding  [ ] Initiation of skin-to-skin contact
- Session 2:  [ ] Early initiation of breastfeeding  [ ] Frequency of breastfeeding
- Session 3:  [ ] Correct positioning and attachment  [ ] Breast problems
- Session 4:  [ ] Heat treatment of breast milk  [ ] Duration and cessation of breastfeeding
- Session 5:  [ ] Demand feeding

If Formula feeding
- Session 1:  [ ] Cost of not breastfeeding  [ ] Points to be reinforced
- Session 2:  [ ] Cleaning and sterilizing feeding and preparation equipment  [ ] Preparing a formula feed

IEC Material (pamphlets) given
- Session 1: Specify:  
- Session 2: Specify:  
- Session 3: Specify:  
- Session 4: Specify:  
- Session 5: Specify:  

Comments:

H166/2012
# Breastfeeding Rates

<table>
<thead>
<tr>
<th>Breastfeeding Practices</th>
<th>SADHS 1998</th>
<th>SADHS(^{15}) 2003</th>
<th>HSRC 2008</th>
<th>SANHANES(^{16}) 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exclusive breastfeeding:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 – 3 months</td>
<td>10,4%</td>
<td>11,9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 – 6 months</td>
<td>1%</td>
<td>1,5%</td>
<td>8%</td>
<td>7,4%</td>
</tr>
<tr>
<td>0 – 6 months</td>
<td></td>
<td></td>
<td>25,7%</td>
<td></td>
</tr>
<tr>
<td>Initiation of Breastfeeding</td>
<td></td>
<td></td>
<td>80%</td>
<td>92,6%</td>
</tr>
<tr>
<td>Never Breastfed</td>
<td>16,6%</td>
<td>20,1%</td>
<td>22,5%</td>
<td>17,5%</td>
</tr>
<tr>
<td>Average duration of breastfeeding</td>
<td></td>
<td></td>
<td>16,6 months</td>
<td>5,9 months</td>
</tr>
<tr>
<td>Mixed Feeding*</td>
<td>70%</td>
<td>Not reported</td>
<td>51,3%</td>
<td>75,1%</td>
</tr>
</tbody>
</table>

*Breastfeeding and introducing inappropriate complementary foods at <6 months
Breastfeeding (EBF up to 6 mo & BF up to 12 mo)
Insecticide treated materials
Complementary feeding
Zinc
Hib vaccine
Clean delivery
Water, sanitation, hygiene
Antenatal steroids
Vitamin A
Tetanus toxoid
Newborn temperature management
Nevirapine & replacement feeding
Measles vaccine
Antibiotics for premature rupture of membrane
Antimalarial preventive treatment in pregnancy

Does it take a village to raise a child?
“Nested rings of responsibilities”

Breastfeeding

- Role in safe motherhood
- Family Planning and birth spacing
- Enhances Immunisations programs
- Security and closeness
- Food security
- Improved woman's Physical and mental health – reduced NCD's
- Child neurological and physical development
- Reduced mortality and morbidity
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- Reduced long term NCD's
Role of Breastfeeding in child survival

6 times greater chance of survival

53% decrease in hospital admissions for diarrhoea

27% decrease in hospital admissions for respiratory tract infections
FIRST 1000 days Right Start. Bright Future.
What’s new?

✓ First 1000 day’s Initiative

  ✓ What is it about?

  ✓ What are we doing?

  ✓ Implications and opportunities
The First 1000 Days “continuum”

-9 to 24 months

270 + 365 + 365 = 1000 😊

Antenatal — Early postnatal / Infancy — Early Childhood

Conception — Birth

Acknowledgement: Linda Aldair
Important facts about the First 1000 Days: what happens…

There is no other period of a person’s life when nutrition has as profound an impact as in the 1,000 days from a woman’s pregnancy until her child’s 2nd birthday.

Development of the Brain
Relationships / attachment
Nutrition / Eating Behaviour
The mother’s mental well being
The problem of toxic stress
Vulnerability of babies and infants
The most rapid period of brain weight gain occurs immediately before and after 40 weeks’ gestation. By the 1000th day the brain has reached 80% of its adult weight.
Importance of the first 1000 day’s: stature

Growth to 50% of adult height by the age of 2 years and deficits and excesses established during this time period are hard to overcome.
From birth to age 18 months, connections in the brain are created at a rate of 1 million per second.
Toxic Stress can impact children in the following ways:

- Causes children to live in fight, flight or fright (freeze) mode.
- Short attention span
- Struggle learning; fall behind in school
- Respond to world as constant danger
- Distrustful of adults
- Unable to develop healthy peer relationships
- Feel failure, despair, shame and frustration

A fetus or baby exposed to toxic stress can have their responses to stress distorted in later life.

Source: Dr. H. T. Chugani, Newsweek, Spring/Summer 1997
Importance of the first 1000 day’s: Social and Emotional Development

The baby’s social and emotional development is affected by the quality of their attachment to its caregiver.
Importance of the first 1000 days

- Babies are disproportionately vulnerable to abuse and neglect.

- For infants and children < 2, the consequences of undernutrition are particularly severe, often irreversible, and reach far into the future.
What are we doing?
The 2030 objective is to:

- A quality experience in a world class, public health service.
- Motivate the population to take responsibility for their health.
- Shift focus from illness to wellness.
- Achieve amongst the best health outcomes in the world.

2030 Vision: “Access to person-centred, quality care”
Provincial Strategic Plan 2014-2019: Provincial Strategic Goals

**STRATEGIC GOAL 1:** Create opportunities for growth and jobs

**STRATEGIC GOAL 2:** Improve education outcomes and opportunities for youth development

**STRATEGIC GOAL 3:** Increase wellness, safety and tackle social ills

**STRATEGIC GOAL 4:** Enable a resilient, sustainable, quality and inclusive living environment

**STRATEGIC GOAL 5:** Embed good governance and integrated service delivery through partnerships and spatial alignment
FIRST
1000 days
Right Start. Bright Future.
3 Core Scientific Concepts (www.developingchild.harvard.edu)

FIRST
1000 days
Right Start. Bright Future.

Nutrition and Health

Nurture, Care & Support

Safety, Protection & Stimulation
# Important First 1000 Day Facts!

The brain grows to 80% of its full size by the age of 2 years!
The brain needs 3 essential elements to grow & develop well, just like a plant
The brain needs loving interaction with a caring adult to grow well
Brain structure is affected by toxic stress during pregnancy & childhood!
Harm to the brain is buffered by the consistent presence of a caring adult
Positive parenting builds confident children to do better at school & get jobs!

## 3 Key Elements

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutrition &amp; Health</td>
<td>Nurture, Care &amp; Support</td>
<td>Safety, Protection &amp; Stimulation</td>
</tr>
</tbody>
</table>

## 3 Key Time Periods

- **Pregnancy**: 270 days
- **1st year**: 365 days
- **2nd year**: 365 days

## To grow the best brain by 2 years...

- **Start early in Pregnancy**
- **Start caring for your baby before birth**
- **Nurture, care, and support**
- **Safety, protection, and stimulation**
- **Nutrition and health**

---

![Image of a plant growing](image.png)
From Interventions to Packages and Platforms

Interventions are implemented by single sectors.

Interventions need to be packaged taking into consideration the unique set of risks and adversities that define complex environments & nurturing care.

Delivery Platforms need to be identified for services.
1ST 1000 DAYS INITIATIVE: PROJECT DESIGN

Nurturing Care and Responsive Parenting

Nutrition & Health

Nurture, Care & Support

Safety, Protection & Stimulation

Health Interventions

Intersectorial Interventions

Communication Strategy

Adapted, Slide presentation, Pia Britto, UNICEF, DOHaD conference November 2015
## Services at all service platforms

<table>
<thead>
<tr>
<th>NUTRITION &amp; HEALTH</th>
<th>PARENTING &amp; INFANT WELL-BEING)</th>
<th>CARE &amp; SUPPORT</th>
<th>MATERNAL MENTAL WELL-BEING</th>
<th>EARLY &amp; LIFELONG LEARNING</th>
<th>PROTECTION &amp; SAFETY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empathetic service providers</td>
<td>Parenting preparedness Parenting skills (positive, sensitive parenting) Parenting support Infant mental health risk screening Parent-Infant assessment Counselling services Social support services incl ECD Community support Family support</td>
<td>Self-care and wellness Mentoring / Peer support Role of men and fathers Family support Social support services (e.g. CSG, SASSA, ECD) Community support Consistent, attentive adult caregiver arrangements Workplace support (maternity leave, breast-feeding, child care, etc)√ Empathetic counselling Substance, smoking &amp; alcohol intervention services Emergency care arrangements / preparedness√</td>
<td>Risk screening in pregnancy√ Maternal Mental Health Care√ Empathetic Counselling√ Family support Social support services Community support</td>
<td>Sensitive parenting/caregiving (responsive to baby’s cues) Infant Wellbeing (Sense of Safety &amp; Wellbeing) Parent-Infant bonding (serve and return) Play, singing, story-telling, dancing, etc.)√ Book-sharing Family support Social support services incl ECD, toy libraries Community support</td>
<td>Protection from unwanted pregnancy√ Adequate spacing between pregnancies (2 years in-between)√ Good Antenatal and Well-baby Care (immunisations, etc.)√ Clean air to breathe (away from smoke) Clean water to drink Hygienic practices (hand-washing, sanitation) Child safety in the home Road &amp; pedestrian safety Safe spaces to play Safe neighbourhoods Environmental support services Community and Family engagement and support</td>
</tr>
</tbody>
</table>
Many things we need can wait. The child cannot. Now is the time his bones are formed, his mind developed. To him we cannot say tomorrow, his name is today.

Gabriela Mistral
Stages of Infection and Nutrition Intervention
## WHO Recommendations for Adults and Adolescents

### Table 1. WHO recommended macronutrient intake for adolescents and adults living with HIV

<table>
<thead>
<tr>
<th>Nutrient/population group</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Energy</strong></td>
<td></td>
</tr>
<tr>
<td>Asymptomatic HIV+ adults</td>
<td>Increase of ~10%</td>
</tr>
<tr>
<td>Adults with symptomatic HIV infection or AIDS (including pregnant/lactating women)</td>
<td>Increase of ~20–30%</td>
</tr>
<tr>
<td>Asymptomatic HIV+ children</td>
<td>Increase of ~10%</td>
</tr>
<tr>
<td>Children experiencing weight loss (regardless of HIV status)</td>
<td>Increase of ~50–100%</td>
</tr>
<tr>
<td>Children with severe acute malnutrition</td>
<td>No change from WHO guidelines</td>
</tr>
<tr>
<td><strong>Protein</strong></td>
<td>No change indicated in the relative proportion of protein, although absolute quantities would increase with increased energy intake (10–12% of total energy intake)</td>
</tr>
<tr>
<td>All population groups</td>
<td></td>
</tr>
<tr>
<td><strong>Fat</strong></td>
<td>No change indicated (&gt;17% of total energy intake)</td>
</tr>
<tr>
<td>Individuals who are HIV or HIV+ but not taking ARVs</td>
<td></td>
</tr>
</tbody>
</table>

ARV: antiretroviral drug; HIV+: HIV-positive; HIV−: HIV-negative.

a Although this programming guide does not address children, we have left the recommendations for children here for completeness.
b Compared with normal dietary requirements recommended by WHO.
Source: WHO (44).
### Increased energy requirements at various life stages

<table>
<thead>
<tr>
<th>Life stage</th>
<th>Increased energy requirements (kcal/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pregnancy, first trimester a</td>
<td>85</td>
</tr>
<tr>
<td>Pregnancy, second trimester a</td>
<td>285</td>
</tr>
<tr>
<td>Pregnancy, third trimester a</td>
<td>475</td>
</tr>
<tr>
<td>Lactation (first 6 months), b well nourished, good gestational weight gain</td>
<td>505</td>
</tr>
<tr>
<td>Lactation (first 6 months), b undernourished, poor gestational weight gain</td>
<td>675</td>
</tr>
</tbody>
</table>

- Additional energy will be required for adolescent and undernourished pregnant women; these requirements should be reduced if pregnant women are overweight or obese.
- Energy requirements for milk production after six months are highly variable but should be considered.

Source: WHO
# WHO Staging and Nutrition Intervention

<table>
<thead>
<tr>
<th>WHO Stage</th>
<th>Nutrition Intervention should be Case and Clinical presentation individualized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>- Baseline Nutrition Assessment and Management</td>
</tr>
<tr>
<td>Stage 2</td>
<td>- Assessment for NTP if unexplained weight loss &lt; 10% occurs or Weight loss &gt;10%</td>
</tr>
<tr>
<td>Stage 3</td>
<td>- Symptomatic Management of Diarrhoea, oral thrush, TB Comorbidity</td>
</tr>
<tr>
<td></td>
<td>- Clinical Assessment for anaemia and Dietary support</td>
</tr>
<tr>
<td></td>
<td>- Tube Feeding – Depressed level of consciousness</td>
</tr>
<tr>
<td>Stage 4</td>
<td>- Dietary counselling for oral herpes lesions, Kaposi sarcoma lesions – oesophageal</td>
</tr>
</tbody>
</table>
Contact Us

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Integrated Nutrition Programme: MDHS

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