

# Consumer testing of the preliminary Paediatric Food-Based Dietary Guidelines (PFBDG) among mothers with infants younger than 6 months in selected urban and rural areas in the Western Cape

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## Abstract

**Aim:** To determine the comprehensibility of the preliminary paediatric food-based dietary guidelines (PFBDG) for infants younger than 6 months in South Africa.

**Methods:** This qualitative study used focus group discussions held in the Western Cape to evaluate the comprehensibility and the understandability of the preliminary PFBDG. Groups were convened according to area of residence (rural, urban formal and urban informal) and ethnicity (white, coloured and black) to reflect the Western Cape population. Focus group discussions were conducted in the participant's home language, namely Afrikaans, English or Xhosa. The purposive sample included 89 women with infants younger than 6 months divided in 20 groups.

**Results:** In general, mothers understood the guidelines and could reportedly implement them, but constraints such as having to go back to work, being tired and not having enough breast-milk were volunteered. There were very few problems regarding the PFBDG terminology except with the word 'regularly' in the context of the oral hygiene guideline. With regard to the breast-feeding guideline there was some confusion over whether other foods could be included while breast-feeding. Suggestions were made to include 'only' in the breast-feeding guideline. Some of the participants did not know anything about cleaning the infant's mouth, and suggested it be changed to the overall hygiene of the infant.

**Conclusion:** The findings from this study indicate that it may be possible to use one set of dietary guidelines for infants younger than 6 months for all ethnic groups living in the Western Cape, provided that these guidelines are accompanied by supportive documentation citing examples and reasons for the implementation of the guidelines. Recommendations were made for the PFBDG Work Group to revise the preliminary PFBDG for infants younger than 6 months for implementation and further action.

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## Background

According to the World Health Organization (WHO), sufficient feeding in early childhood is essential for the development of each child to reach its full potential. Birth to 2 years of age is the critical period for optimal growth, health and behaviour development. It is difficult to repair the damage that results from deficiencies during the first 2 years of life, and this can have serious effects on the child's life. It is therefore necessary to feed children optimally from birth.<sup>1</sup>

The WHO and the Food and Agricultural Organization (FAO) of the United Nations recommended that important information about optimal nutrition can be provided to the public by means of Food-based Dietary Guidelines (FBDG), which are defined as qualitative statements that express dietary goals in terms of foods, not nutrients. They are evidence-based, simple and practical (action-oriented). They are intended for the consumer and in some countries, form the basis of nutrition policies and programmes.<sup>2</sup> Various countries have since begun to adapt their guidelines to make them food-based.<sup>3</sup> Dietary guidelines previously used in South Africa were originally compiled for other countries, and were inappropriate for South Africa because they were not compiled to suit the country's needs. Since South Africa is partly developed and partly developing, our specific health problems were not addressed. The availability,

accessibility and affordability of foods and the acceptability of the guidelines for the different communities and their different lifestyles were not taken into account. Most of the previous South African policies addressed chronic illnesses of lifestyle in the white community.

In 1997 the South African FBDG Work Group was founded and set about proposing and consumer testing a set of FBDG for healthy adults (aged seven years and older).<sup>4</sup> This set of 11 guidelines was accepted as policy by the South African Department of Health, Nutrition Directorate (June 2003). It was further decided to compile FBDG for groups with specific needs, including children, and a PFBDG Work Group was formed in 2000. This Work Group consists of a group of professionals who, after following a process of literature review, broader stakeholder collaboration and pre-testing, in 2004 proposed the preliminary guidelines for age groups younger than 6 months, 6–12 months, and 1–7 years. These proposed guidelines needed to be tested on the consumer to ensure that they would be interpreted correctly, understood by different language groups, practically executable and culturally acceptable. This study aimed to consumer test the guidelines for the age group younger than 6 months. The proposed guidelines were translated into Afrikaans and Xhosa (Table I).

**Table 1: The preliminary PFBDGs for infants younger than 6 months in Afrikaans, English and Xhosa**

Afrikaans	English	Xhosa
Borsvoeding is die beste vir jou baba gedurende die eerste 6 maande	Breast-feeding is best for your baby during the first 6 months	Uncanciso lwebele lolona lulungileyo kwiintsana kwinyanga ezi - 6 zokuqala
Maak u baba se mond gereeld skoon	Clean your baby's mouth regularly	Coca umlomo wosana lwakho rhoqo
Neem u baba elke maand kliniek toe	Take your baby to the clinic every month	Yisa usana lwakho ekliniqi qho ngenyanga
Geniet tyd saam met jou baba	Enjoy time with your baby	Lonwabele ixesha nosana lwakho

The guideline '*Breast-feeding is best for your baby during the first 6 months*' is based on the WHO recommendation that prescribes exclusive breast-feeding for infants younger than 6 months of age.<sup>5-7</sup> It is well documented that infants who receive breast-milk suffer from fewer infections and illnesses than those fed with alternative foods. Further benefits for not only the infant but the mother, the family and society have also been documented.<sup>8,9</sup>

The motivation for the second guideline, '*Clean your baby's mouth regularly*', is that it has been found that implementation of mouth cleaning practices from as early as one month, improves oral hygiene in later life.<sup>10</sup> This guideline is meant to establish healthy behaviour and awareness early on to avoid caries and poor oral hygiene.

Public health policy in the form of the Integrated Management of Childhood Illnesses (IMCI) programme, growth monitoring and immunisations at the clinic level are important factors that may contribute to the infant's health and wellness. The guideline '*Take your baby to the clinic each month*' was included to enable the mother to monitor the infant's growth and development. At the same time, the infant receives the necessary immunisations and supplementation and is monitored for the presence of disease. At the clinic the mother will also receive additional information about caring for her infant, and may receive support from other mothers.<sup>11</sup>

Love and care, together with the correct feeding practices, are essential for optimal growth and development.<sup>12</sup> The guideline '*Enjoy time with your baby*' indicates that the mother should spend a lot of time with her infant to improve its development and sense of love. Spending time with an infant helps the infant develop social skills, make a connection to voices and closeness, and feel safe, warm and connected.<sup>12</sup>

## Methodology

The aim of the study was to determine the comprehensibility of the preliminary PFBDG for infants younger than 6 months. A cross-sectional qualitative study design was followed. Convenience sampling was used to select towns in the Western Cape in urban areas (Bishop Lavis, Vanguard, Welgemoed, Mitchell's Plain, Table View, Atlantis and Durbanville) that were in close proximity to the Stellenbosch University's Faculty of Health Sciences campus, and in rural areas (Worcester and Malmesbury) in close proximity to where one of the investigators resided. A purposive sample of women was obtained from community health centres, private hospitals and

breast-feeding clinics in the selected areas. The aim was to reach women who could be representative of the Western Cape population. The study was performed over a period of 4 weeks, in which at least one focus group discussion (FGD) was held for 4 mornings per week. The inclusion criteria for the mothers were mothers with infants younger than 6 months, who consented to participate and were Afrikaans-, English- or Xhosa-speaking.

The number of focus group discussions conducted at each clinic was governed by the willingness of mothers to participate, and until the obtained data reached saturation point, i.e. when no new data were found. Before commencement of the FGD, written informed consent was obtained from all participants including permission for video recording of the proceedings as well as the completion of a socio-demographic questionnaire that included questions regarding ethnicity, home language, education, employment, housing and whether the subject was breast-feeding or not. One fieldworker facilitated the discussions in English and Afrikaans (Xhosa-speaking counsellors at the clinics led the Xhosa discussions), another took written notes of the proceedings using the spoken language of the participants, and a third controlled the video camera. During the FGD sessions, the facilitator used a standardised discussion guideline to direct the discussion. The purpose of the study and the interpretations of each guideline in terms of terminology, concepts, constraints to the implementation and their practical applicability were topics for discussion. The discussion guidelines were available in English, Afrikaans and Xhosa.

The FGD were recorded (video and written), and English and Afrikaans transcripts were interpreted by the investigators after every session. The transcriptions of the Xhosa FGD were first translated back to English by a Xhosa translator. The final transcripts were then analysed to identify themes in the responses. Ethics approval for the study was obtained from the Committee for Human Research, Faculty of Health Sciences, Stellenbosch University.

## Results

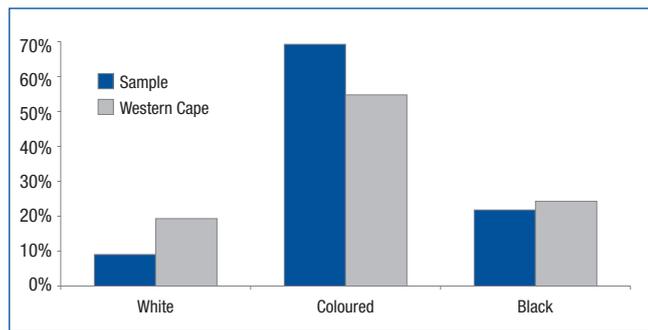
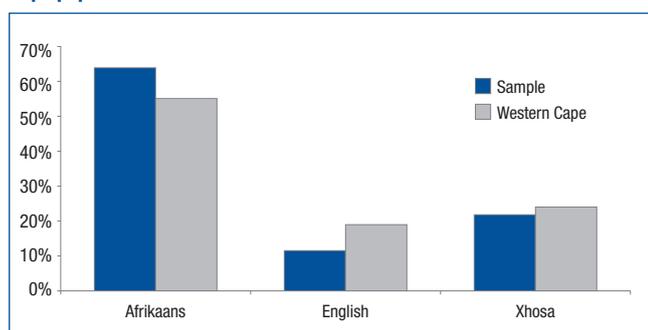
Qualitative data were collected from a total of 89 mothers during 20 FGD with a range of two to 14 participants per session (average of 4.5 per group). The distribution was fairly equal between urban areas (N=52; 14 FGD) and rural areas (N=37; 6 FGD). The sample reflects a good representation of the population distribution of the Western Cape as obtained from the 2001 census data<sup>13</sup> regarding ethnicity (Figure 1) and language (Figure 2), but there were no participants in the English coloured rural, English white urban, and English white rural Groups.

In urban areas 50% of the black and coloured participants, and in rural areas 45% of the black and coloured participants, had received 7–11 years of formal education. A higher percentage of participants from rural settlement types had a lower level of education (grade 6 or lower) (Table II).

Findings from FGD are reported under the identified themes regarding the aspects of interpretations of each preliminary PFBDG in terms of concepts, terminology, constraints in implementation, and practical application.

### 1. Breast-feeding is best for your baby during the first 6 months

All the groups were clearly informed about the benefits of breast-feeding for their infants. Some responses indicating this are: '*Better*

**Figure 1: Sample distribution of ethnicity (N=89) compared with the Western Cape population****Figure 2: Sample distribution of language (N=89) compared with the Western Cape population****Table II: Distribution of the mothers' level of education (%) (N=89)**

Level of education	Urban (N=52)	Rural (N=37)
None	2	0
Grade 1–6	9	19
Grade 7–11	50	45
Matric	27	22
Post-matric	12	14

*connection with the baby*' (coloured, informal urban), *'Best because the baby is more healthy*' (coloured, rural), *'Breast-milk has more nutrients, the baby has less allergies, it's easier and the baby gets all it needs'* (white, formal urban).

The guideline was easily understood by the majority of the participants, although some of the coloured and white participants from urban and rural areas were confused as to whether the guideline meant that they could include other food and fluids, e.g. water and tea, while still breast-feeding their infants.

Regarding constraints for this guideline, the majority of participants indicated that they felt their breast-milk was not enough to fulfil the infant's needs. These mothers reported that they started giving complementary foods, e.g. water, porridge and soft vegetables, from as early as one month. The Xhosa mothers (informal urban areas) indicated that their infants cried a lot when they only breast-fed them, but when they gave formula milk as well, the infants did not cry as much and slept well during the night. The Xhosa mothers (informal urban areas) reported that it is nonsense to say you should only breast-feed your baby for 6 months: *'It depends on the baby and the mother.'* Another reported constraint was the insufficient

maternity leave that is provided by employers. The participants also complained about having sore breasts and being uncomfortable.

The majority of the participants indicated that this guideline was easily understood and did not need to be changed. As an exception, one of the coloured participants (rural settlement) mentioned: *'Formula milk is just as good as breast-milk and, therefore, I don't agree with the guideline.'* This same participant felt that the guideline should accommodate those mothers who can't breast-feed at all. Some participants recommended that reasons for breast-feeding being the best for the first 6 months of an infant's life and the benefits should be explained. Other suggestions were: *'It is not necessary to say "for the first 6 months" because a baby drinks breast-milk for longer periods than that'* (coloured, informal urban). In informal urban settlements, the Xhosa mothers indicated that to specify the number of months to breast-feed is unnecessary because they will feed the infant other foods and formula milk when the infant wants to have more food. In informal urban settlements, mothers speaking Afrikaans interpreted the guideline differently in that it was not restricting feeding to just breast-feeding: *'The guideline says that breast-feeding is best, but if there is an alternative and if the mother wants to use it, it's up to her.'* (coloured, informal urban). On the other hand, in formal urban settlements an Afrikaans-speaking mother felt that it was necessary to include a word such as *'only'* to really express the importance of breast-feeding.

Since the term *'exclusive breast-feeding'* is used by the WHO, but not used in the guideline (although planned to be used in the supportive documentation), it was decided to ask the mothers for their interpretation of the term. White and coloured mothers (formal urban) and some of the participants from rural areas, understood the meaning of exclusive breast-feeding according to the definition i.e. *exclusive breast-feeding is defined as the provision of no other liquids or solids, besides breast-milk, unless medically indicated.*<sup>1</sup> The majority of participants (coloured and Xhosa, informal urban and rural settlements) however did not understand the term or had no idea what it could mean. *'Regularly breast-feeding'*, *'bottle feeding'*, *'not necessarily breast-feeding'* and *'breast-feeding and something else'* were some of the explanations provided for the term.

## 2. Clean your baby's mouth regularly

None of the participants understood this guideline correctly, i.e. that it concerns oral hygiene. Misunderstanding was at different levels, from *'If adults should clean their mouths, babies' mouths should be cleaned too'* (coloured, informal urban) to the coloured and Xhosa mothers (both informal urban and rural settlements) reporting that they cleaned their infants' mouths to prevent infection from germs and candidiasis (thrush). Those mothers, who indicated that it was important to clean the infants' mouths, reported mostly using glycerine on a dummy or a wet towel, toilet paper or a clean nappy. Coloured and Xhosa mothers (informal urban and rural settlements) understood the guideline to mean cleaning the infant's mouth inside, while the white mothers (formal urban settlements) thought it meant cleaning the outside of the mouth.

*'Regularly'* was interpreted as meaning to clean the infant's mouth after every feed, or with every bath, or just when the infant's mouth was dirty. Some mothers suggested that this guideline be excluded altogether or to change it to *'a baby's overall hygiene and not only oral hygiene'* (white, formal urban, and coloured and white, rural).

### 3. Take your baby to the clinic every month

The majority of the participants, except for some of the Xhosa mothers from informal urban settlements, agreed on the importance of this guideline and reported taking their infants to the clinic. The clinic was accessible for most of the mothers, but for some it was quite inconvenient to get to the clinic and the long waiting periods discouraged them. Others mentioned that having to work made it difficult to attend the clinic as they have to apply for leave.

The participants knew why they had to take their infants to the clinic every month and they also understood the importance of their knowing what the clinic sister should do at each visit. Some of the coloured informal urban, white formal urban and white rural participants mentioned that taking your infant to the clinic every month is too often. Comments included the following: *'Mothers should react on their motherly instinct to know whether their infants are ill or if something else is wrong'* (white, formal urban); *'With the first baby you don't always know what to do ...'*; *'it's good to take your baby more than once a month ...'*; *'support and advice received'* (white, formal urban). There were mothers who reported only taking their infant to the clinic for their immunisations or on the dates that the nursing sister gave them.

Although the guideline was understood by most of the participants, they suggested that it should be changed as follows: *'Take your baby to the clinic to check on growth, development and health and to receive immunisations'* (white, formal urban); *'Take your baby to the clinic when he/she is ill'* (coloured, informal urban); *'Take your baby for a check-up every month'* (coloured, rural) or *'Take your baby to the clinic regularly'* (coloured, informal urban).

### 4. Enjoy time with your baby

*'Spend every hour with your baby'* was the comment from a coloured mother from an informal urban settlement. All the participants said they find it very important to *'play', 'talk', 'sing', 'walk with your baby', 'give love and attention', 'be there when the baby wakes up', 'massage the baby', 'watch the baby sleeping', 'read poems'* and *'touch the baby'*. The participants really enjoyed bathing and feeding their infants, as indicated by statements such as *'Enjoy all the time with your baby'* (coloured, informal urban), *'It is important to have such bonding sessions'* (white, formal urban) and *'...you see new things in your baby'* (coloured, rural). The mothers who had more than one child, reported that they found it difficult to satisfy all of their children without having to deal with jealousy and selfishness.

The guideline was reportedly important to all the mothers. They felt it easy to implement the guideline practically, even though it was exhausting. Including the father to spend time with the infant was a recommendation to include in this guideline: *'The father's input and support is very important'* (coloured, informal urban and rural, and white, formal urban). The family's support in helping the mother was also mentioned as an important factor by some of the mothers. Recommendations were also made to include reasons or benefits of spending time with your infant: *'Enjoy time with your baby to: stimulate his/her development; physically touch your baby; feed your baby; stimulate intellectual development; massage your baby; and ensure emotional bonding'* (white, formal urban). They also suggested the initiation of a day-to-day routine of practices to ensure quality time with the infant but also to enable the mother to get some rest.

### Additional guidelines that the participants recommended to be added to the preliminary PFBDGs.

The majority of the white and coloured participants from formal and informal urban settlements respectively, as well as from rural settlements, suggested that a guideline should be included about the overall hygiene of an infant, or it should replace the guideline about cleaning the infant's mouth. White participants from formal urban settlements made a comment that if an infant's mouth must be cleaned, then the infant's overall hygiene is as important, if not more important. The suggestion for changing the guideline was: *'Check on the overall hygiene of your baby by changing wet and dirty nappies and bathing your baby regularly'* (coloured, informal urban).

There was a suggestion (coloured, rural) that a guideline be included to explain that crying is an infant's communication tool: *'Babies that cry a lot for the first 3 months are not happy babies.'*

Some of the participants suggested inclusion of a guideline that explains the role of both parents and their families. Some of them also recommend that mothers should be advised not to feed their infants according to specific feeding times but rather on demand.

### Discussion

Clearly mothers were well informed about the benefits of breast-feeding, but 25% were not breast-feeding their infants, which is disturbing. There seems to be most confusion concerning the exclusivity of breast-feeding. It is disconcerting that the majority of mothers understood exclusive breast-feeding to mean the opposite of what is meant by the term, i.e. instead of not giving anything except breast-milk, they thought it meant not to give breast-milk, or to give it with other foods/liquids. This confusion with the term 'exclusive breast-feeding' was also found in a similar study consumer testing the PFBDG for children aged 6–12 months.<sup>14</sup> In this group, mothers also reported giving complementary feeds as early as when the infant is a month old.<sup>14</sup> It is important to note that mothers seem to believe their milk supply to be insufficient and complain of sore breasts, which indicates poor support and education. Insufficient maternity leave was also mentioned as a major constraint to continued breast-feeding. Clarity on the guideline on 'exclusive breast-feeding' is especially important in the light of the high prevalence of HIV and AIDS in South Africa and the association between mixed breast-feeding and increased HIV transmission.<sup>15</sup> Furthermore, it was recently reported that women who do not exclusively breast-feed their infants are more likely to experience health problems with their breasts, and that those with breast disease are more likely to transmit HIV to their infants.<sup>16</sup>

The coloured and Xhosa groups understood the guideline *'cleaning your baby's mouth regularly'* as primarily intended for prevention of candidiasis (thrush). A possible explanation for this may be related to the HIV/AIDS issue, as thrush is perceived as a sign of being HIV positive.<sup>17,18</sup> The wording for this guideline will have to be reconsidered to emphasise the oral hygiene as intended and not the overall hygiene as perceived by the mothers.

The participants recognised the importance of the guideline *'take your baby to the clinic each month'*. The Xhosa mothers, however, did not think it is necessary to take their infants each month. The mothers knew and understood what the clinic sister should do when they go to the clinic. Though the clinics were accessible for the

participants, getting there and having to wait for long periods before being helped were reported to be inconvenient, which was again consistent with previous findings.<sup>14</sup>

Comments on the 'enjoy time with your baby' guideline made it clear that the motherly instinct was well interpreted by the participants, and seen as an important part of caring for their infants. It was considered important to include the support of the father as well as benefits for the infant when spending time with them. The father's role may be valid when it comes to helping the mother while she wants to have a bit of time for herself. It can also be beneficial for the relationship between infant and father.<sup>12</sup>

It was also suggested that general reasons and examples must be given with the guidelines to make them more comprehensible and easier to implement. Reasons and examples are usually included in the supportive documentation which is provided with the guidelines.

A limitation of the study was having fewer participants than expected and small FGD groups. Although some groups were not represented as well as others, it was representative of the study population of the Western Cape.

The authors conclude that it may be possible to use one set of dietary guidelines for all ethnic groups living in the Western Cape. The supportive documentation accompanying the guidelines should cite examples and reasons for implementation of the guidelines.

It is recommended that this core set of PFBDGs should be translated into every official South African language and that the accompanying supportive documentation must reflect cultural and socio-economic diversity that exists in the country. It may also be appropriate to conduct the testing of PFBDGs for infants younger than 6 months in other South African provinces to accommodate other ethnic groups, especially the remote rural areas where education regarding nutrition and health is crucial.

### Recommendations to the PFBDG Work Group for the revision of the preliminary PFBDG for infants younger than 6 months include the following:

#### 1. Breast-feeding is best for your baby for the first 6 months.

Change to 'Breast-feeding is the only feed your baby needs for the first 6 months' or add the word 'only' to the existing guideline. Supportive documentation should include the benefits of breast-feeding and definition and explanation of the term 'exclusive breast-feeding'. Treatment of breast problems and correct latching techniques should be addressed. On a national level, lobbying for improved maternity leave should be considered.

#### 2. Clean your baby's mouth regularly.

The PFBDG Work Group should re-assess the importance of this message, and perhaps consider leaving it out as it causes confusion. Supportive documentation should clearly state reasons for and benefits of cleaning an infant's mouth. Correct cleaning practices and treatment should be addressed. Clinic personnel should also be informed about this guideline and should encourage the mothers to practise it.

#### 3. Take your baby to the clinic every month.

No changes are needed for this guideline. The reasons for its importance and the procedures and medications an infant can receive should be addressed in the accompanying supportive documentation. It is also essential to include growth and development charts to refer to when necessary.

#### 4. Enjoy time with your baby.

No changes are needed for this guideline. The reasons for and the benefits of spending time with the infant should be described in the accompanying supportive documentation.

#### 5. Additional guidelines

A guideline should be included regarding feeding on the infant's demand, and accompanying documentation should state the reason for this.

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