

1 An introduction to the revised food-based dietary guidelines for South Africa

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Abstract

Food-based dietary guidelines (FBDGs) are short, positive, science-based messages that aim to change the eating behaviour of the general population towards more optimal diets that meet energy and nutrient requirements, while simultaneously helping to protect against the development of noncommunicable diseases. Recently, a national working group revised the South African set of FBDGs (i.e. the draft paediatric FBDGs and the general FBDGs). Expert working groups have written technical support papers for each of the individual revised FBDGs published in this supplement of the journal. The recognition that child malnutrition remains a major public health problem in South Africa led to the formulation of a specific set of guidelines for the mothers and caregivers of infants and young children from birth to five years of age, based on existing paediatric nutrition-related health issues and local dietary habits. In this introductory paper, the process of the development and revision of the FBDGs for South Africa is briefly reviewed. The need for specific FBDGs is motivated by prevailing health risk factors and dietary intakes in South Africa. Potential barriers to the implementation of the guidelines are identified and recommendations are made for the development of educational material, as well as for the design of implementation, monitoring and evaluation programmes. It is concluded that the use of guidelines to educate and empower mothers and caregivers, as well as schoolchildren, adolescents and adults, on how to follow a healthier diet, could be a powerful tool in combating both under- and overnutrition-related public health problems throughout the life course.

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Introduction

The perception that “people eat foods and not nutrients” led nutrition scientists to replace nutrient-based recommendations for the public with food-based dietary guidelines (FBDGs), which are dietary recommendations based on local food and eating patterns.^{1,2} Therefore, FBDGs are science-based policy recommendations in the form of guidelines for healthy eating.³ They are a translation of the evidence-based nutrient recommendations into food or dietary patterns that should guide the general population to consume a healthy, optimal diet. The key concepts of FBDGs and the scientific evidence-based methodology for their preparation and use were conceptualised and designed by the joint Food and Agriculture Organization of the United Nations (FAO)/World Health Organization (WHO) consultation that was held in Nicosia, Cyprus in 1995.¹ This effort was a response to the World Declaration and Plan of Action on Nutrition adopted by the 1992 International Conference on Nutrition.⁴ The action plan was to eliminate and reduce famine and famine-related deaths, starvation and specific nutritional deficiencies, and also to reduce nutrition-related noncommunicable diseases (NCDs). Thus,

FBDGs became part of the FAO/WHO strategy to promote appropriate diets through recommendations of optimal dietary patterns and healthy lifestyles. Governments were called upon to provide evidence-based advice to the public in the form of guidelines that they could understand, to which they could relate, and which they could apply. Therefore, it is important to note that the purpose of FBDGs is to simultaneously ensure the adoption of adequate diets that meet all nutrient needs, and diets that help to prevent the development of deficiencies and NCDs.

In the nutrition literature, FBDGs are often suggested as a tool that can be used to improve optimal nutrition and health.^{5,6} Unfortunately, less is known about the successes and failures and the impact of implementation on dietary behaviour and health in the short or long term. This may be because, although the science of and supporting methodology for the development of FBDGs has been documented to a certain extent,¹⁻³ many countries still lack the capacity with which to translate scientific evidence into FBDGs and to develop appropriate educational and promotional material, implementation programmes and monitoring and evaluation strategies.

The objectives of this introduction are to review the South African process by which FBDGs for the general population, as well as those for infants and young children, were developed and revised; to summarise nutrition-related health outcomes and dietary intakes in South Africa, in order to motivate for specific, local guidelines; and to explore the barriers to communicating nutritional messages to the public. A holistic approach towards the development of educational materials for the FBDGs messages and the design of an appropriate implementation plan, as well as monitoring and evaluation strategies, will be discussed.

The South African process for developing and revising FBDG messages

The Nutrition Society of South Africa (NSSA) initiated the process of designing FBDGs for the general South African population in 1997⁷ in partnership with the Department of Health, Directorate Nutrition, the Medical Research Council (MRC) and several other stakeholders from different United Nations' agencies and food producer organisations in South Africa. The testing of the developed messages in women of different population groups⁸ was funded by the United Nations Children's Fund (UNICEF). The technical support papers, promoting the guidelines from scientific literature and providing more information about the types and amounts of the different food groups to be eaten, were published in the *South African Journal of Clinical Nutrition* in 2001.⁹ The Department of Health formally adopted the set of FBDGs in 2003 to form the basis of nutrition communication to the public, with the addition of a guideline on sugar intake, based on the relationship between sugar consumption and dental caries. The final set of 11 guidelines is listed in Table I. These FBDGs were aimed at individuals aged seven years and older.

Therefore, a similar process was initiated by the NSSA, who established a paediatric working group to develop FBDGs for infants and children younger than seven years of age, which was published in *Maternal and Child Nutrition* in 2007.¹⁰ The paediatric guidelines were specific to the following age groups: birth to 6 months; > 6 months to

< 12 months; and > 1 year to < 7 years. They paralleled the FBDGs for children aged seven years and older,¹¹ with the introduction of the same messages to target the younger ages. However, these paediatric FBDGs were not officially adopted by the Department of Health as, because of funding constraints, the messages had not been fully tested.

The majority of South Africans are experiencing a rapid process of economic development, urbanisation, acculturation and modernisation of their dietary habits. This phenomenon, together with new knowledge about the relationships between dietary intakes and health, led to the recommendation that the 2003 FBDGs should be reviewed and adapted accordingly on a regular basis.⁷ In 2011, the Department of Health, Directorate of Nutrition, embarked on a process, funded and supported by the FAO, to develop a food guide for South Africa. As part of this process, it was decided to review the existing FBDGs.

A national working group was convened and, during a workshop that took place in March 2011, several expert working groups, including a paediatric working group, were formed to review the new literature and make suggestions regarding revision of the specific guidelines. The expert and paediatric working groups reported their findings and made suggestions to the national working group during a meeting in July 2011. During this meeting, consensus was reached on the formulation of a set of FBDGs for the general population of individuals older than five years of age, a separate set of paediatric guidelines for infants and children younger than five years of age, the inclusion of a milk guideline in the general FBDGs, a focus on the quality of fats in the fat guideline, and minor changes to the wording of some of the other guideline messages. It was also agreed that the alcohol guideline created much confusion, especially the words "drink sensibly". As there are other initiatives in South Africa that address alcohol abuse, it was decided to delete this guideline message. However, a technical support paper on alcohol is included in this supplement, to assist nutritionists and dietitians in dealing with alcohol recommendations.

Special attention was given to the words "eat", "consume" and "use". "Use" was restricted to the salt, sugar and fat guidelines, because salt and sugar, and at times fats and oils, are seen as ingredients that are added in the preparation of food. Debate on the use of "regularly", "sparingly" and "moderately" led to slight reformulation of some guidelines. It was also decided that each expert working group would take responsibility for writing the technical support paper according to a specific terms-of-reference document, and that information in the technical support paper should also focus on the needs of infants and children under five years of age, where

Table I: First set of South African food-based dietary guidelines, 2003

- Enjoy a variety of foods.
- Be active.
- Make starchy foods the basis of most meals.
- Eat dry beans, peas, lentils and soy regularly.
- Chicken, fish, meat or eggs can be eaten daily.
- Drink lots of clean, safe water.
- Eat plenty of vegetables and fruit every day.
- Eat fats sparingly.
- Use salt sparingly.
- If you drink alcohol, drink sensibly.
- Use foods and drinks containing sugar sparingly, and not between meals.

relevant. Final consensus on the wording of each guideline and the information included in the technical support papers, published in this supplement, was obtained during a meeting of the national working group on 26 June 2012.

The revised set of general FBDG messages for South African adults and children aged five years and older is listed in Table II.

The food guide, illustrating the food groups that should be eaten regularly, developed in parallel to the revision of the FBDGs, is shown in Figure 1. This food guide has been developed for South Africans with support from the FAO. It only shows food groupings that are necessary for healthy eating. It does not, like many other food guides, such as the widely used food pyramid, include items such as sugar, sweetened foods and drinks, or salt. The proportional size of the food group circles symbolically reflect the proportional volume that the group should contribute to the total daily diet.

Nutrition-related health outcomes in South Africa

One of the first principles in designing FBDG messages for a specific country or region is that the guidelines should address existing public health problems.¹⁻³ To revise the

FBDGs, the MRC's comparative risk assessment for South Africa, published in 2007, was used to re-evaluate the appropriateness of the FBDGs. The assessment was based on the underlying causes of premature mortality and morbidity observed in South Africa in 2000.¹² The risk factors were identified based on the burden of disease, taking into account factors such as "likely to be among the leading causes of burden of disease or injury, evidence of causality, being potentially modifiable and availability of data".¹² In Table III, a summary of the contribution of 17 selected risk factors to percentages of total deaths, as well as total disability-adjusted life years, is shown.

Of the 17 selected risk factors, nine relate directly to nutrition as acknowledged in the MRC report, namely high blood pressure,¹³ alcohol harm,¹⁴ excess body weight,¹⁵ high cholesterol,¹⁶ diabetes,¹⁷ low fruit and vegetable intake,¹⁸ childhood and maternal underweight,¹⁹ vitamin A deficiency²⁰ and iron deficiency anaemia.²¹ Two of the risk factors, namely physical inactivity (leading to an energy imbalance and overweight), and unsafe water, sanitation and hygiene (leading to diarrhoeal diseases), indirectly relate to nutrition and are therefore also addressed by the FBDGs.

Table II: Revised general food-based dietary guidelines for South Africans, 2012

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



Figure 1: The South African food guide (Department of Health, Directorate Nutrition)

Table III: Contribution of selected risk factors to percentage of deaths and disability-adjusted life years in South Africa in 2000 (521 thousand deaths and 16.2 million disability-adjusted life years)¹²

Identified risk factor	% total deaths	% total DALYs
Unsafe sex and STIs (HIV/AIDS)	26.3	31.5
High blood pressure	9.0	2.4
Tobacco smoking	8.5	4.0
Alcohol harm	7.1	7.0
High BMI and excess body weight	7.0	2.9
Interpersonal violence (risk factor)	6.7	8.4
High cholesterol	4.6	1.4
Diabetes (risk factor)	4.3	1.6
Physical inactivity	3.3	1.1
Low fruit and vegetable intake	3.2	1.1
Unsafe water, sanitation and hygiene	2.6	2.6
Childhood and maternal underweight	2.3	2.7
Urban air pollution	0.9	0.3
Vitamin A deficiency	0.6	0.7
Indoor air pollution	0.5	0.4
Iron deficiency anaemia	0.4	1.1
Lead exposure	0.3	0.4

AIDS: acquired immune deficiency syndrome, BMI: body mass index, DALYs: disability-adjusted life years, HIV: human immunodeficiency virus, STIs: sexually transmitted infections

The relationship between overnutrition and NCDs (associated with the first six risk factors that relate directly to nutrition) is well established, and forms the basis for the WHO recommendations for the prevention of chronic diseases.²² The last three risk factors directly relate to undernutrition and a lack of dietary variety.

Recently, Vorster et al²³ showed that the present nutrition transition, associated with economic development, urbanisation and modernisation in South Africa, is characterised by changes in dietary patterns and nutrient intakes that will increase the risk of diet-related NCDs. These changes include decreased intake of staple foods that are rich in starch and dietary fibre, increased consumption of food from animal origin which is rich in total and saturated fat, decreased intake of legumes and vegetables, and increased intake of energy-dense, micronutrient-poor snack and convenience foods (which are often very salty) and sweetened carbonated beverages. Although more fruit consumption was observed, the increased meat and fruit intake was insufficient to meet micronutrient needs.²³

The primary nutrition-related conditions and risk factors in South African children include stunting, underweight, vitamin A deficiency, the risk of inadequate micronutrient intake, overweight and obesity, and the presence of early NCD risks.^{24,25} Nationally representative studies have been conducted on South African children. In 1994, the South African Vitamin A Consultative Group (SAVACG) recruited children aged 6-71 months²⁴ and, in 1999, the National Food Consumption Survey (NFCS) group included children aged 1-9 years.²⁵ Similar results were reported by the investigators. In the SAVACG study, the national prevalence for underweight [weight for age < -2 standard deviation (SD)] was 9.3%, stunting (height for age < -2 SD) was 22.9%, and wasting (weight for height < -2 SD) was 2.6%.²⁴

In the NFCS, the national prevalence of underweight was 10.3%, stunting 21.6% and wasting 3.7%.²⁵ According to the NFCS,²⁵ dietary intake in most children was confined to a relatively narrow range of foods of low micronutrient density. Reported energy intakes were variable and were particularly inadequate in rural areas. While requirements were met for protein and macronutrients in general, inadequate intakes were reported for vitamins A, C, niacin, vitamin B₆, folate, calcium, iron and zinc.²⁵ However, it must be noted that these data were collected prior to mandatory fortification of staple foods in 2003.

In the SAVACG survey, vitamin A deficiency was identified as a public health problem, as 33% of the sampled children were marginally deficient (serum retinol < 20 mg dl/l).²⁴ Children in the age group 36-47 months were the most affected. In 2003, regulations for the mandatory

fortification of all maize meal and wheat flour with vitamin A, thiamine, niacin, riboflavin, pyridoxine, folate, iron and zinc was introduced.²⁶ A randomised intervention trial was conducted thereafter in the North West province, to evaluate the effectiveness of vitamin-fortified maize meal in improving the nutritional status of one- to five-year-old malnourished children.²⁷ Despite the small sample size, after 12 months the study showed that fortified maize meal could significantly improve weight gain in children in the experimental group (4.6 kg vs. 2 kg). The micronutrient status of one- to three-year-old children was also superior.²⁷

In the past, the problem of undernutrition in children may well have led to overweight not being investigated. In 1994, 9% of children aged 3-6 years from a representative sample of African children in Cape Town were reported to be overweight (weight for age z-score 2 SD), while 20.1% reflected weight for height z-scores > 2 SD.²⁸ More recently, combined overweight and obesity of 20.3% was observed in infants aged 6-12 months in the Eastern Cape and KwaZulu-Natal provinces, compared to 15% of children aged 12-24 months, with a low prevalence of underweight and wasting for all age groups.²⁹ Secondary data analysis³⁰ of the NFCS data collected in 1999, using the body mass index (BMI) reference percentiles recommended for use in children by the International Obesity Task Force to determine the prevalence of overweight and obesity, showed that 17.1% [confidence interval (CI): 15-19.2%] of the children had BMI ≥ 25 kg/m² (combined overweight and obesity range). These data show that in South Africa, the double burden of under- and overnutrition is already seen in young children, and call for innovative ways to tackle the problem of malnutrition.

Both nonexclusive breastfeeding and inappropriate complementary feeding are globally acknowledged to have a significant negative impact on the child mortality and disease burden.³¹ South Africa does not have country trend data on key indicators to monitor breastfeeding and complementary feeding practices. The available literature shows that the initiation rate of breastfeeding is approximately 88%. However, only 8% of babies are exclusively breastfed at six months, and more than 70% of infants receive solids foods before the age of six months.³² This indicates that there is cause for concern about the feeding practices of infants and young children in South Africa and specific paediatric FBDGs are certainly warranted. The paediatric working group agreed that a single set of FBDGs was not appropriate for this age group, and thus agreed that four age categories and associated FBDGs would be considered: 0-6 months, 6-12 months, 12-36 months and 3-5 years. Although the exact wording would need to be tested to ensure that the messages are clearly understood, suggested FBDGs for the four categories were proposed and are listed in Table IV.

It appears that little progress has been made in improving the nutritional status of South African children in the past two decades, with persistent high levels of stunting and growing concerns about overweight and obesity. These concerns are discussed in the technical support papers in this supplement.

Table IV: Proposed paediatric food-based dietary guidelines, still to be tested

0-6 months
Give only breast milk, and no other foods or liquids, to your baby for the first six months of life.
6-12 months
- At six months, start giving your baby small amounts of complementary foods, while continuing to breastfeed to two years and beyond. - Gradually increase the amount of food, number of feeds and variety as your baby gets older. - Feed slowly and patiently and encourage your baby to eat, but do not force him or her. - From six months of age, give your baby meat, chicken, fish or egg every day, or as often as possible. - Give your baby dark-green leafy vegetables and orange-coloured vegetables and fruit every day. - Start spoonfeeding your baby with thick foods, and gradually increase to the consistency of family food. - Hands should be washed with soap and clean water before preparing or eating food. - Avoid giving tea, coffee and sugary drinks and high-sugar, high-fat salty snacks to your baby.
12-36 months
- Continue to breastfeed to two years and beyond. - Gradually increase the amount of food, number of feedings and variety as your child gets older. - Give your child meat, chicken, fish or egg every day, or as often as possible. - Give your child dark-green leafy vegetables and orange-coloured vegetables and fruit every day. - Avoid giving tea, coffee and sugary drinks and high-sugar, high-fat salty snacks to your child. - Hands should be washed with soap and clean water before preparing or eating food. - Encourage your child to be active. - Feed your child five small meals during the day. - Make starchy foods part of most meals. - Give your child milk, <i>maas</i> or yoghurt every day.
3-5 years
- Enjoy a variety of foods. - Make starchy foods part of most meals. - Lean chicken or lean meat or fish or eggs can be eaten every day. - Eat plenty of vegetables and fruit every day. - Eat dry beans, split peas, lentils and soya regularly. - Consume milk, <i>maas</i> or yoghurt every day. - Feed your child regular small meals and healthy snacks. - Use salt and foods high in salt sparingly. - Use fats sparingly. Choose vegetable oils, rather than hard fats. - Use sugar and food and drinks high in sugar sparingly. - Drink lots of clean, safe water and make it your beverage of choice. - Be active! - Hands should be washed with soap and clean water before preparing or eating food.

Considering the diet-related risk factors associated with mortality and morbidity in South African society, as well as the documented changes in dietary patterns and nutrient intakes by the majority of the South African population, it is clear that the double burden of both under- and overnutrition should be addressed by the FBDGs. All of the risk factors are addressed by at least one, and mostly by more than one, of the FBDG messages. It is important to note that many of these risk factors are inter-related, and that they share common pathways. Therefore, one dietary recommendation may impact on more than one risk factor, while some risk factors would need more than one intervention. For example, a recommendation to reduce total and saturated fat intake should address both excess weight gain and high blood cholesterol levels, while advice on increased intakes of wholegrain starchy foods, legumes, milk, *maas* and yoghurt, as well as vegetables and fruit, contributes to better micronutrient nutrition.

Specific dietary deficiencies and excesses that relate to these risk factors, and how the FBDGs will address them, are discussed in more detail in each of the technical support papers in this supplement.

Communicating nutrition messages to the public: barriers to the implementation of FBDGs

The purpose of FBDGs is to inform the public about healthy eating, and to motivate people to make the right choices that will result in adequate, balanced diets that will also protect against undernutrition, excess weight gain and other NCDs. This often means that people should eat improved quality diets, but in some cases they may also need to eat less of certain foods. Therefore, FBDGs aim to change dietary behaviour, which is known to be extremely difficult. This is evidenced by the worldwide obesity epidemic and increasing rates of NCDs in developing countries. Most of these countries still battle with the consequences of food and nutrition insecurity, and now have to simultaneously address direct dietary behaviour that leads to obesity and NCDs.

The problem of conveying balanced nutrition messages was recently analysed by Goldberg and Sliwa.³³ They point out that four sets of interlinked factors are major challenges in nutrition communication. These factors were grouped as:

- The evolutionary nature of the science on which recommendations are based.
- The many sources of communication of that science.
- The agenda or motivation of each source.
- The multifaceted nature of consumers, who are the recipients of these communications.

When designing any intervention programme with regard to use of FBDGs in the context of the South African situation

in order to promote healthier eating, these factors or barriers to implementation should be considered.

The changing and developing nature of nutrition science

As will be seen in the technical support papers, the best available evidence about the relationship between nutrition and health has been used to formulate each guideline. However, continued research, based on technological developments in methodologies as part of the advancement of science, often produce new knowledge that will change dietary recommendations.

For example, in the past, the established relationship between saturated fat intake, hypercholesterolaemia and heart disease led to a recommendation that polyunsaturated fat margarine should replace saturated fat in the diet. New knowledge about the detrimental consequences of the trans-fat content of these margarines, as well as the beneficial effects of omega-3 fatty acids, have influenced fat recommendations over the years. Today, margarine is manufactured to be trans-fat free, and more emphasis is placed on the quality of fat to ensure sufficient intakes of omega-3 fatty acids. There are many other examples, such as new knowledge about the beneficial effects of whole grains, dietary fibre, and pre- and probiotics, the potentially protective effects of antioxidant chemicals found in plant foods, the anti-cancer properties of some vegetables, the bioactive compounds in milk, and the contribution of added sugar to childhood obesity. All these developments have influenced revision of the South African FBDGs.

Therefore, it is possible that the public could lose confidence in dietary recommendations because they change over time. This barrier should be seen as a challenge to educate the public and establish the understanding that nutrition science is evolutionary and dynamic and that new research findings for which there is convincing evidence may lead to new dietary recommendations. This illustrates the importance that dietary recommendations should be made responsibly, and only when there is convincing evidence that the advice will benefit consumers, address public health problems and cause no harm.

Conflicting sources of nutrition information

There are many sources of dietary information (people and organisations, and their communication material and channels). These sources include scientists, health professionals, scientific and professional societies, academic institutions, scientific journals, government departments, the United Nations agencies involved in nutrition (WHO, FAO, UNICEF and the International Council of Nutrition), non-government organisations, the food and beverage industry, and a growing multitude of social, printed, radio and electronic media. The way in which nutrition information is presented by, and in, these sources,

varies, and is often not in a format that aims to inform the public.

Unfortunately, the agendas and motivations of the many sources of nutrition information also differ. For some, ideally, the motivating factor could be the responsibility of improving health, while for others it could be the promotion and sale of specific products. Consequently, the same set of nutrition knowledge may be communicated to the public in totally different ways. This information may be difficult to understand, and misleading. Consumers who must make food and beverage choices could be so bombarded by conflicting information that they simply choose what is affordable, what they like, or what is the most convenient.

Food labels on packaged products provide some useful, standardised and quality-controlled nutrition information,³⁴ but not always in a way that is easily understood by many consumers, or that can easily be converted into guiding relevant choices and appropriate portion sizes. Most suppliers of fresh foods and pre-prepared, ready-to-eat meals and convenience take-away foods do not provide nutritional information. In South Africa, doing so becomes mandatory when a claim is made, and many consumers have little understanding of the nutritional contribution of these foods to a healthy or unhealthy diet.

Aggressive and clever advertising and marketing of specific products to specific consumers during particular times and events may further influence food and beverage choices. An example is the many worldwide efforts to limit advertisements about sugary and salty snack foods to children during prime-time television.³⁵ The impact of these interventions on children's health in South Africa is unknown.

In South Africa, the challenge is the establishment in the mind of consumers of which nutrition information sources can be trusted to provide unbiased, objective and responsible information, based on scientific evidence of beneficial effects, in a way that consumers can understand and be motivated enough by to change their buying and eating behaviour. This would mean the development of skills to translate complex scientific information into meaningful health promotion strategies.³⁶ The use of FBDGs as the basis or starting point for all nutrition communication from different sources of information is a step in the right direction. But it means that all role players must adopt a science-based health agenda for their nutrition communication. They should work together in partnerships to improve the food and beverage environment in South Africa by making healthy choices affordable and available, by influencing consumers to make healthier choices, and by ensuring consistent messaging that does not deviate from the FBDGs.

The multifaceted nature of consumers

Universally, humans inherently prefer palatable diets³⁷ that contain foods that are rich in fat and cream, are refined, and are sugary and salty. This is a major barrier to the adoption of a more varied, healthier diet that contains sufficient unrefined, minimally processed plant foods.

Factors such as differences in levels of education, socio-economic status, age, gender, fashion, peer pressure, culture and tradition, also complicate the implementation of FBDGs and should be taken into account when specific groups are targeted.

It should also be remembered that when previously disadvantaged people who were hungry or food insecure at any time of their life are suddenly confronted with a wide variety of affordable and palatable food, their choices are not necessarily governed by what is healthy.

The previous set of FBDGs was tested on women in KwaZulu-Natal and the Western Cape.⁸ We recommend that the new guideline on milk, *maas* and yoghurt consumption, and perhaps the ones which are differently formulated to what they were previously, are tested in the same way in various culture groups in different parts of the country. The paediatric FBDGs also require testing.

A holistic FBDG programme

Taking all of the above into account, it is clear that for successful implementation of FBDGs, a holistic approach is necessary, in which all stakeholders or role players work together to improve the food environment and empower consumers to make healthier choices. A national working group has now revised the existing set of FBDGs for South Africa, a food guide has been developed and specific paediatric FBDGs have been proposed. The technical support papers published in this journal explain and promote the FBDG messages to health professionals, and are one set of educational material that can be used to support the FBDGs. Additional educational material for specific target groups should now be developed. This material must address the particular needs of target groups. It must also be arranged in a format that they will easily understand, and to which they can relate and practically implement. It is important that educational materials address the problem of the affordability of food for those suffering from poverty-related food insecurity. For example, they should indicate alternative sources of available food for the needy.

The next step would include designing implementation programmes, for example, by applying social marketing principles to promote the FBDGs in order to improve eating behaviour. It is important that as part of their design, these interventions should include monitoring and evaluation

components. The evaluation components must make provision for process, outcome, impact and efficiency evaluations,³⁸ which should indicate if adjustments to the programme are needed. The monitoring and impact evaluation of the use of FBDGs could form part of regular surveillance of the nutritional status of all South Africans.

Conclusion

South Africans are continually exposed to confusing and misleading dietary information. The revised FBDGs are evidenced-based recommendations on how a healthy diet can be chosen. The technical support papers in this supplement explain how and why each guideline will contribute to a healthier diet in more detail. The FBDG messages are qualitative, but the technical support papers provide information on the amounts (frequency and weight or volumes of portion or serving sizes) recommended for healthy eating. The papers also provide practical advice on how to overcome barriers for the implementation of each guideline. If used correctly, FBDGs can be a powerful tool for addressing nutrition-related public health problems in South Africa.

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