

## Review

# Food based dietary guidelines in Vietnam: progress and lessons learned

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The food based dietary guidelines (FBDGs) is a crucial tool for nutrition education and communication in Vietnam. Together with the changes of socio-economic situation, Vietnam needs to deal with different nutritional problems including malnutrition, overweight and undiversified diets at the same time. From 1995 to the present, three versions of FBDGs have been developed and revised in a period of every 5 years. The FBDGs, Food Guide Pyramid and Food Square made a good set of nutritional education tool which were disseminated through a wide range of activities and communication channels. The evaluation of FBDGs will be carried out before its revisions to reflect eating patterns and lifestyles of consumers whom the nutritional education programs wish to reach. In developing countries like Vietnam, the socio-economic situation is changing over short period of time. Therefore, the assessment of appropriateness and implementation progress of the FBDGs is necessary and should be done after a period of every 5 or 10 years. The implementation of the FBDGs should be closely connected with the activities of the National Plan for Nutrition and should have involvement from multi-sectoral organizations. Training, monitoring and evaluation for implementation of the FBDGs are essential for the success of guiding consumers to convert advices into action. The lessons learned from previous FBDGs' implementation can be used to develop a new version of FBDGs that is more appropriate.

**Key Words:** Dietary guidelines, communication tool, food habit, food culture, food guide

## INTRODUCTION

In medical history, proper eating to prevent some serious diseases has a long tradition. Hypocrate – the mentor of modern medicine advised to eat liver to cure night blindness. In 1753, James Lind was in charge of British Navy medicine and knew that British sailors did not get Scurvy on long trips at sea as a result of regularly eating yellow lemon (rich of vitamin C). Many diseases have been cured through application of a proper diet. Recently, one proved that there was a strong association between eating vegetables and fruits and lower risk of chronic diseases, such as cardiovascular diseases, some cancers. Nutritional science has shed light on the role of "protective" substance in foods for the prevention of above mentioned diseases. Therefore, the application and dissemination of the food based dietary guidelines (FBDGs) are of much interest around the world and become the general principal guidelines on proper nutrition for the community, appropriate to each stage of development process.<sup>1-3</sup>

In Vietnam, malnutrition is a very important health burden. The prevalence of stunting in children under 5 years was very high at 46.9%.<sup>4</sup> Therefore, Vietnam should have nutritional solutions appropriate for different sub-populations. It is undeniable that continuing efforts to improve meals quality are needed to improve nutritional status for most people, especially those in rural and disadvantaged areas.

The FBDGs is crucial tool for nutritional education and communication in Vietnam. The FBDGs provides a framework for advice to improve food consumption pat-

terns, nutritional well-being, and encourage healthy lifestyles of individuals and population. Together with the changes in the socio-economic situation during the transition period, Vietnam needs to deal with different nutritional problems; including malnutrition, overweight and undiversified diets; at the same time. There is a demand to keep Vietnamese people in the safe corridor between two dangerous edges of which one is a high prevalence of undernourishment and the another an emergence of overweight and obesity. From 1995 to the present, three versions of FBDGs have been developed and revised in a period of every 5 years.

## FOOD BASED DIETARY GUIDELINES IN VIETNAM

From 1995 to the present, three versions of FBDGs have been developed and revised in a period of every 5 years. After the National Plan of Action was ratified by the Prime Minister in 2005 the first version of FBDGs was developed which consisted of 10 advices to communicate within socio-cultural context and focus on locally available foods. The first set of FBDGs had special advice for better organization of meals and development of VAC system (garden, pond and cage) to self-guarantee family food security. Due to high prevalence of malnourished child-

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ren in Vietnam, all versions of FBDGs carry one advice on promoting breastfeeding and proper complementary feeding for children under five years of age. In 2010, the new version of National Strategies of Nutrition was developed and is going to be ratified in the year 2011. The evaluation of FBDGs, therefore, will be carried out before its revisions to reflect eating patterns and lifestyles of consumers whom the nutritional education programs wish to reach. In developing countries like Vietnam, the socio-economic situation is changing over short period of time. Therefore, the assessment of appropriateness and implementation progress of the FBDGs is necessary and should be done after a period of every 5 or 10 years.

#### ***Food based dietary guidelines in the period 1995-2000***

Plan of action of the International Nutrition conference at Roma (1992) mentioned the development of FBDGs for individual countries. In 1995, both FAO and WHO supported this was implemented in Vietnam. FBDGs are a tool for nutrition education and should be based on scientific results. However, in order for FBDGs to really comes to life, and be effective, nutritional educational activities should be organized with specific methods. In order to develop human resources to meet industrialization and modernization requirements, health improvement; especially improvement of nutritional status; is crucial and urgent. The Prime Minister ratified the National Plan of Action for Nutrition (NPAN) in the period 1995-2000 in September 16, 1995.<sup>5</sup> That was the first document on nutrition strategies in Vietnam, in which the Vietnamese Government required that local authorities at all levels include goals of nutrition, poverty reduction, malnutrition reduction into their annual plans for socio-economic development. Therefore, several important goals of the NPAN have been achieved and gradually socialized.

One of the important solutions of NPAN is to strengthen the development of human resources and nutrition education. In order to effectively implement NPAN in the period 1995-2000, The National Institute of Nutrition developed the FBDGs (1995-2000) as the following:

- Eat to meet the body's nutritional needs. Maintaining a healthy weight
- Breast milk is the best for babies. Mothers should eat well, drink enough, and sleep well to have enough milk for exclusively breastfeeding babies in first 4 months of the babies' life and continue breastfeed until babies reach 18-24 months. Only give quality complementary food to babies from the fifth month and after.
- Limit salt intake, less than 300 grams salt per month per person.
- Eat less sugar. Children and adults should not eat cake, candy, soft drinks before a meal. One person should consume only 500 g sugar per month on average.
- Eat fat in moderation. Eat more oil, sesame, peanuts.
- Eat protein foods in moderation, with appropriate amounts of protein from animal resource. Each at least 3 servings of fish in a week. Eat more food products made from soybeans.
- Eat enough vegetables, roots and fruit to get more vitamins, minerals and fiber.

- Ensure that foods should be hygienic and safe and must not be contaminated. Wash hands before eating.
- Family meals should be well organized, to provide adequate nutrition, good flavor, good feeling and savings. Development of nutritional square in VAC ecosystems (VAC means pond, garden and cage) to self provide high nutritional valuable foods for the family meals.
- Together with balanced diets, active lifestyles, regular and appropriate healthy sports activities should be maintained.

#### ***Food based dietary guidelines in the period 2001-2005***

Because, nutritional education continue to be the first priority solution in NPAN of the period 2001-2010,<sup>6</sup> FBDGs play an essential role in the implementation of the plan. From experiences of implementing FBDGs in the previous period (1995-2000), the FBDGs was developed to conform with nutrition situations and diets in the new period. Its content was updated new recommendations of WHO. Also the National Strategies from 2001 to 2010 was approved by the Prime Minister. The FBDGs, therefore, was revised accordingly. The second version of FBDGs also showed political will to tackle nutrition-related health problems. FBDGs brought about communication to increase knowledge to prevent non-communicable diseases caused by diets and traditional foods of the Vietnamese people. In March 27, 2002, the Minister of Health approved the FBDGs for the period 2001-2005 with the following content:

- Eat various foods and regularly change dishes.
- Breastfeed new born babies right after birth, and exclusively for the first 6 months after birth. Give proper supplementary food to babies and continue breastfeeding until babies reach 18-24 months.
- Eat protein rich foods with the balance ratio between proteins from animal and plant resources. Increase consumption of tofu and fish.
- Consume fat at a proper amount, consume a combination of animal fat and vegetable oil at appropriate proportion. Eat more sesame,
- Use iodized salt. Do not consume too much salt.
- Eat fresh and safe foods, eat more vegetables and fruits daily.
- Drink soy milk. Increase consumption of the calcium-rich foods such as milk, dairy products, and small fish.
- Use clean water for food preparation. Drink enough water daily.
- Maintain a healthy weight.
- Maintain a healthy lifestyle, active, regular physical activity. Do not smoke. Limit beer, wine, sweetened foods.

#### ***Food based dietary guidelines in the period 2006-2010***

In 2006, through scientific data from national surveys carried out by National Institute of Nutrition, it appeared that food habits and eating patterns of Vietnamese had changed. So is there any solution to limit and prevent nutritional problems emerging such as: "the metabolic syndrome", overweight, obesity and non-communicable chronic diseases related to unbalanced diets? How do we enhance and maintain good health in fast growth socio-economic circumstances?

Only a proper and balanced diet with moderate fat consumption, reduced meat consumption and increase consumptions of fish, vegetables, and fresh fruit can help to maintain good health and prevent the proliferation of the above mentioned diseases. The third version of FBDGs was developed and implemented at nation-wide level in a comprehensive process with the involvement of multiple stakeholders such as Ministry of Health, Ministry of Agriculture, and women union. The FBDGs, Food Guide Pyramid and Food Square made a good set of nutritional education tool which were disseminated through a wide range of activities and communication channels. We expect in the future that Vietnam will have more nutritional counseling centers to provide healthy nutrition guidelines for people, where people can learn how to prepare food for their families, and how to select good foods to ensure food hygiene and nutritional value to bring about good health, according to the FBDGs.

From the beginning of the 21st century, Vietnam faces double burdens of malnutrition of which one is stable reduction of malnutrition prevalence while stunting remains high in children under 5 years of age (prevalence of stunting in children under 5 years old is 29.6% in

2005), and another is the increase of overweight, obesity and non-communicable diseases related to nutrition, especially in big cities. Therefore, Vietnam should have nutritional solutions appropriate for different audiences.

Depending on scientific results of the National Institute of Nutrition and conclusions of scientific conferences and workshops, the Ministry of Health approved the FBDGs for the period 2006-2010 in January 17, 2007 with the following contents:

- Eat various foods and regularly change dishes.
- Breastfeed new born babies right after birth, and exclusively for 6 months after birth. Give proper supplementary food to babies and continue breastfeeding until babies reach 18-24 months.
- Eat protein rich foods with the balance ratio between proteins from animal and plant resources. Increase consumption of fish.
- Consume fat at a proper amount, consume a combination of animal fat and vegetable oil at appropriate proportions. Eat more sesame,
- Consume milk and dairy products according to age.
- Do not consume too much salt. Use iodized salt when

Main characteristics of FBDGs in several countries

No	Advices	Thailand	Malaysia	Philippines	China	Japan	South Africa	VN 1996-2000	VN 2001-2005	VN 2006-2010
1	Food diversification	X	X	X	X	X	X	X	X	X
2	Eat rice and cereal	X	X		X		X			
3	Eat more vegetable	X	X	X	X	X	X	X	X	X
4	Limit animal fat	X	X	X	X	X	X	X	X	X
5	Eat more bean, nuts, sesame, peanut	X		X	X	X	X	X	X	X
6	Eat poultry, fish, egg...	X		X	X		X	X	X	X
7	Do not consume too much salt	X	X	X	X	X	X	X	X	X
8	Limit sweetened food	X	X				X	X	X	X
9	Food safety	X		X	X			X	X	X
10	Drink milk, soybean milk	X		X	X				X	X
11	Breastfeeding/ proper complementary feeding		X	X				X	X	X
12	Drink enough water		X							
13	Energy balance				X	X				
14	Maintain healthy weight	X	X		X	X		X	X	X
15	Physical activities		X	X	X	X	X	X	X	X
16	Family meals					X		X	X	X
17	Limit alcohol	X		X	X		X		X	X
18	Do not smoke			X					X	X

preparing food

- Eat more vegetables and fruits daily.
- Choose and consume clean and safe foods and drinks.
- Drink enough boiled water daily, limit consumption of beer, alcohol and sweetened foods.
- Maintain a healthy lifestyle, regular physical activity. Maintain a healthy weight. Do not smoke.

In 2010, the new version of National Strategies of Nutrition was developed and is going to be ratified in the year 2011. The evaluation of FBDGs, therefore, will be carried out before its revisions to reflect eating patterns and lifestyles of consumers whom the nutritional education programs wish to reach.

#### **IMPLEMENTATION OF FBDG IN VIETNAM AND LESSONS LEARNED**

FBDGs is a key content in nutrition education of the NPAN. It should be learned by every person, every family to effectively take action to improve nutritional status, health and quality of life.<sup>7</sup>

The achievement of nutritional health goals, as depicted in science-based dietary guidelines, is unlikely unless considerable effort is made to translate the science-based guidelines into action.<sup>8</sup> The FAO/WHO consultation group suggested that the development of FBDGs should be informed not only by science-based public health issues, but also by the social, economic, agricultural, and environmental factors affecting food availability and eating patterns.<sup>9</sup> In Vietnam, the FBDGs was developed with the involvement of multi-sectoral organizations to ensure that it did not miss key contents for nutrition care. The involvement of various organizations also contributed to wide dissemination of FBDGs by agencies, scientists and educators.

The advices in FBDGs were communicated by not only health care system but also through public associations such as women's unions, farmer union, and youth unions which are common in grass-root levels of Vietnam. Trainings were provided for those associations by the technical institute of Ministry of Health – the National Institute of Nutrition.

FBDGs in Vietnam always carried advice on breast-feeding and complementary feeding due to the high prevalence of undernourished children. The FBDGs in Vietnam was tested before it was implemented to guarantee its validity and credibility.

#### **CONCLUSION REMARKS AND RECOMMENDATIONS**

In developing countries like Vietnam, the socio-economic situation is changing over short periods of time. Therefore, the assessment of appropriateness and implementation progress of the FBDGs is necessary and should be done after a period of every 5 or 10 years.

The implementation of FBDGs should be closely connected with the activities of the National Plan for Nutrition and should have involvement from multi-sectoral organizations.

The training, monitoring and evaluation for implementation of the FBDGs are essential for the success of guiding consumers to convert advices into action. Lessons learned from previous FBDGs' implementation can be used to develop a new version of FBDGs more appropriate for the future.

#### **AUTHOR DISCLOSURE**

None of the authors of the above manuscript has declared any conflict of interest which may arise from being named as an author on the manuscript.

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## 越南的食物基礎飲食指南：進展及經驗教訓

食物基礎飲食指南(FBDGs)在越南是一個營養教育及傳播訊息的重要工具。隨著社經情況的改變，越南需要同時應付不同的營養問題，包含營養不足、體重過重及不夠多樣化的飲食。自 1995 年至今，每 5 年為一期，共有三套 FBDGs 版本被制定及修正。FBDGs、食物指南金字塔及食物方塊形成一組良好的營養教育工具，並透過各式各樣的活動及傳播管道廣為宣導。在 FBDGs 修訂之前會完成評估工作，以反映營養教育系統希望傳遞訊息的消費者之飲食模式及生活型態。在發展中國家如越南，社經狀況正在短時間內改變。因此，評估 FBDGs 的適當性及執行進展是必要的，且應該在每隔 5 或 10 年內進行。FBDGs 的執行需緊密地連結全國營養計畫活動，且應該有多部門機構的參與。FBDGs 的執行訓練、監測及評量對於成功的引導消費者將建議轉化為行動是必要的。之前 FBDGs 執行的經驗與教訓，可以幫助發展一個更適切的 FBDGs 新版本。

**關鍵字：**飲食指南、傳播工具、飲食習慣、飲食文化、食物指南