









Dietary guidelines for the elderly in Primary Health Care: development and validation of a protocol based on the Food Guide for the Brazilian Population

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Abstract

Objective: Develop and validate a protocol for the use of the Food Guide for the Brazilian Population (FGBP) in the dietary guidelines for elderly people during individual clinic appointments in Primary Health Care (PHC). **Methods:** The elaboration followed six methodological steps, namely: (1) protocol format definition; (2) definition of the instrument for assessing food consumption; (3) extracting applicable Food Guide recommendations for individual dietary guidelines; (4) evidence systematization on dietary and nutrition needs of the elderly; (5) development of nutritional guidelines messages for the elderly; (6) content and apparent validation and data analysis. **Results:** As products of the steps, the protocol structure was defined and dietary guidelines were elaborated based on the nutritional and health needs of the elderly population, considering the functional capacity and physiological and social changes of this life cycle. The protocol was well assessed by experts and health professionals as to clarity, relevance (content validity index > 0.8) and applicability. In addition, the participants made some suggestions to improve the clarity of the messages and to expand the applicability of the instrument with elderly Brazilians. **Conclusion:** The protocol can contribute to the qualification of dietary guidelines in PHC, dissemination of information from the Food Guide and promotion of comprehensive care and healthy aging of the population.

Keywords: Primary Health Care. Dietary Guidelines. Practice Guidelines. Aged. Validation Study.

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INTRODUCTION

Primary Health Care (PHC), responsible for the longitudinal monitoring of people, plays a major role in comprehensive health care for the elderly^{1,2}. Recent studies show an increase in the body weight of this population³ and indicate that approximately 70% have at least one chronic non-communicable disease (NCD)⁴.

Food and nutrition actions in PHC are associated with the promotion of healthy eating and the prevention of diseases resulting from NCDs, with dietary guidelines being an interdisciplinary health practice⁵. However, dietary guidelines finds barriers to be incorporated into the practice of services, being carried out with low frequency and, mostly, attributed to doctors or nutritionists. In addition, the low training of professionals, the difficulty in managing the time of appointments and the lack of instruments that facilitate dietary guidelines also pose challenges for the promotion of healthy eating.^{6,7,8}

The existing tools to guide the practice of professionals about food are usually disease-centered, leading to a health practice focused on their recovery, disregarding the expanded aspect of healthy eating⁹. Among the elderly, the focus on the treatment of diseases can pose stigma about aging and limit comprehensive care for these individuals¹⁰.

The Food Guide for the Brazilian Population (hereinafter called Food Guide), outlines recommendations on healthy eating for the entire population, and is a material based on scientific evidence that provides support for the qualification of dietary guidelines in the Unified Health System (SUS)¹¹. Its elaboration derived from a holistic perspective, comprising biological, cultural, social and environmental dimensions of food. Updated in 2014, the Food Guide reestablishes the healthy eating paradigm basing its recommendations on the level and purpose of food processing, which can be summarized in the rule of thumb: “always prefer in natura or minimally processed foods and cooking preparations to ultra-processed foods”¹². Therefore, the Food Guide should be used as a technical reference for dietary guidelines. However,

the use of this material by PHC professionals in clinical routine with different life cycles or phases is not yet established.

Considering the importance of promoting healthy eating in favor of healthy aging and the need for instruments that facilitate and qualify dietary guidelines in PHC, the objective of this study was to develop and validate a protocol for the use of the Food Guide for the Brazilian Population in Brazil in dietary guidelines for the elderly during individual clinical appointments in PHC.

METHODS

This is a methodological study on development and validation of a protocol for the use of the Food Guide for dietary guidelines for the elderly at PHC.

Food Guide for the Brazilian Population

Published in 2014, the Food Guide is an official document that presents recommendations on healthy diet, based on evidence on the rapport between diet and health, systematized in five chapters. The first chapter presents the principles that guided its elaboration; the second one presents recommendations for the choice of food based on classification according to level and purpose of industrial processing; the third one addresses how to combine food in meals and provides recommendations on variety and ways of preparing food based on the traditional Brazilian diet; the fourth one discusses the ways of eating and how time, attention, the environment and the sharing of meals influence the quality of the diet and the pleasure in eating; and the fifth shows potential obstacles to adherence to the recommendations and suggests ways to overcome them¹¹.

Assuming the Food Guide as a technical reference for guidance and promotion of healthy eating, the development of this protocol is part of a matrix project that developed a series of individual dietary guideline protocols to apply the Food Guide in different life cycles/events. The methodological basis that guided the development of the series was described in a previous publication¹².

Development of the protocol to use the Food Guide for dietary guidelines for elderly people

To elaborate the series of protocols, a team of seven researchers free of conflicts of interest and experts in dietary guidelines based on the Food Guide and on PHC was formed.

The elaboration of the protocol to use the Food Guide for the elderly was carried out following six steps.

(1) protocol format definition; (2) definition of the instrument for assessing food consumption; (3) extracting applicable Food Guide recommendations for individual dietary guidelines; (4) evidence systematization on food and nutrition needs of the elderly; (5) development of dietary guidelines messages for the elderly; (6) content and apparent validation.

Step 1. Format definition: documents on the elaboration of guidelines for clinical practice were analyzed, as well as PHC protocols effective in Brazil¹³. The objective was to investigate the possible formats, analyze their characteristics and identify the most appropriate to guide dietary guidelines in individual appointments in PHC.

Step 2. Definition of the instrument to assess food consumption: To support decision-making for dietary guidelines, a search was carried out on existing instruments for assessing food consumption. The objective was to identify an assessment instrument of the main recommendations from the Food Guide that could be used by any PHC professional during individual appointments.

Step 3. Extracting the recommendations: Two researchers carried out a systematic reading of chapters 2, 3, 4 and 5 of the Food Guide in order to identify appropriate and relevant recommendations that were in line with the indicators of the food consumption assessment instrument identified in Step 2.

Furthermore, additional recommendations considered relevant to be included in the guidelines were identified, even if they were not addressed by the food consumption assessment instrument. The

other five researchers on the expert team reviewed the recommendations to elaborate the final list.

Step 4. Evidence systematization on the food and nutrition needs of the elderly: a literature review was carried out by searching the Lilacs, PubMed and gray literature databases (academic Google) for original articles published in English, Portuguese or Spanish, using the terms: elderly, epidemiological surveys, food consumption and eating behavior. Based on scientific evidence produced in dietary surveys, the year 2000 was used as a starting point, considering the year in which the SABE (Health, Well-being and Aging) study began, which is of great relevance in the elaboration of population data on the elderly. The reading was done by a researcher and the entire process of searching, extracting and synthesizing data was discussed as a team. Additionally, it was carried out a search for technical materials from the Ministry of Health^{2,14} on the health of the elderly and diet as well as a consultation on the report on food consumption data from the Family Budget Survey (POF) 2017-2018.

Step 5. Development of dietary guidelines messages for the elderly: dietary guidelines messages were elaborated based on the recommendations of the Food Guide extracted in Step 3 to direct dietary guidelines to the specificity of the elderly diet systematized in Step 4, considering obstacles to healthy eating in this life cycle.

Step 6. Content and apparent validation: As a result of the previous steps, version 1 of the protocol was elaborated, divided into subsections. At this step, the validity evidence of the protocol version 1 was assessed.

6.1- Content validation: consisted of assessing the clarity and relevance of the content, as well as collecting suggestions for version 1, through a panel of experts in the following knowledge areas: health of the elderly, food guide and nutritional care in PHC. The experts received support materials by email explaining the validation process, the systematization of life cycle evidence (result of Step 4) and an online form to evaluate each component of the protocol using a 4-point scale ('the item is unclear/relevant' (1); 'major revisions are needed to make the item clear/relevant' (2); 'minor revisions are needed to make

the item clear/relevant' (3); and, 'the item is clear / relevant' (4). Additionally, experts were asked to justify the need for modifications. The protocol components are identified in Table 1 and the numbers presented correspond to the minimum and maximum scores obtained in the assessment of clarity and relevance using the 4-point scale. After completing the form, the experts were invited to participate in an online focus group to collect general impressions about the protocol. Upon the experts collaboration, changes were made to the protocol, thus leading to version 2.

6.2 - Apparent validation: Subsequently, the apparent validation of version 2 of the protocol was carried out, which aimed to identify the content understanding and the protocol applicability by its potential users - health professionals. Online focus groups were held with health professionals with higher education who work in PHC in the five regions of the country. The collaboration from health professionals was taken into account to elaborate the final version of the protocol.

All focus groups were conducted by the researchers on the team, playing the roles of moderator and observer. All focus groups were recorded and later transcribed.

Data analysis of the validation step

For the analysis of the answers filled in the online form, the Content Validity Index (CVI) was used, which measures the proportion of experts who expressed agreement regarding the clarity and relevance of each protocol component. The CVI was calculated by the proportion of grades (3) and (4) divided by the total number of specialists, separately for clarity and relevance. The average CVI was also calculated considering a simple average of the CVI values for clarity and relevance. Components with CVI > 0.80 were considered adequate, that is, they did not need to be modified¹⁵.

The reasons indicated in the online form were analyzed according to Bardin¹⁶ in order to identify suggestions and comments related to the specificity of elderly people. After spotting the most recurrent

suggestions made by the specialists, researchers defined themes for suggestions and selected demonstrative examples. Suggestions considered relevant were incorporated into version 2 of the protocol.

The transcripts of the focus groups with professionals were also evaluated with thematic content analysis¹⁶. Two team members read the transcripts, pre-defined the analysis categories and extracted the related statements. The pre-definition of categories and extraction of the statements were monitored and verified by a third member of the team.

The focus groups were recorded and transcribed, upon permission of the participants. All participants signed the Free and Informed Consent Form. This study was approved by the ethics committee of the Universidade de São Paulo (4,232,862) and conducted in partnership with the Ministry of Health.

RESULTS

The results of the steps described in the methodology will be presented in the items: Protocol structuring (Steps 1 to 3), Evidence on the dietary and nutrition needs of the elderly (Steps 3 and 4) and Protocol validation (Step 6).

Protocol structuring

The adopted methodology culminated in a Usage Protocol, defined according to the Comissão Nacional de Incorporação de Tecnologias (CONITEC) as "documents that set criteria, parameters and standards for the use of a specific technology in a given disease or condition". The Food Guide is understood as the technology to be used for dietary guidelines for elderly people. The protocol was divided into the following subsections:

- a. Introduction: contains brief information about the Food Guide, characteristics of the life cycle and outline of the guidelines target audience, the purpose of the protocol and general instructions on conduct, time and number of dietary guidelines for the elderly;

- b. Instructions on how the protocol should be used: step-by-step on how to use the protocol (for example: fill in the instrument to assess food consumption, follow the decision-making flowchart and the dietary recommendations);
- c. Instrument for assessing food consumption: the Food Consumption Markers form of the Sistema de Vigilância Alimentar e Nutricional (SISVAN)¹⁷, was chosen because it is a concise instrument, already used in the service routine of PHC professionals and that effectively addresses the main recommendations of the Food Guide through nine indicators on healthy and unhealthy eating.
- d. Decision flowchart: the flowchart directs the health professional to dietary guidelines according to the questions on the SISVAN form, priority recommendations and the Food Guide rule of thumb. The flowchart is shown in Figure 1.
- e. Recommendations: dietary guidelines messages related to each consumption marker on the SISVAN form. Six recommendations were elaborated: “Recommendation 1 - Encourage the daily consumption of beans”, “Recommendation 2 - Advise the avoidance of sweetened beverages”, “Recommendation 3 - Advise the avoidance of ultra-processed foods”, “Recommendation 4 - Advise the daily consumption of vegetables”, “Recommendation 5 - Encourage the daily consumption of fruits”, “Recommendation 6 - Encourage the person to eat in appropriate environments and with attention”.
- f. Valuing eating habits: messages to encourage the continuity of healthy eating practices.
- g. Additional messages: messages that were not covered by the SISVAN markers, but are relevant in the dietary guidelines for the elderly.

Evidence on the dietary and nutrition needs of the elderly

The search in the Lilacs, Pubmed and gray literature databases found eight, 738 and 70 articles respectively. Seven scientific papers¹⁸⁻²⁴ were included in the evidence synthesis with analysis of the databases of the Health, Well-being and Aging (SABE) study, of the Longitudinal Study on Health and Well-being of Brazilian Elderly (ELSI-Brasil), on the National Health Survey 2013/2014 and VIGITEL (Surveillance of Risk and Protection Factors for Chronic Diseases by Telephone Survey) (Chart 1).

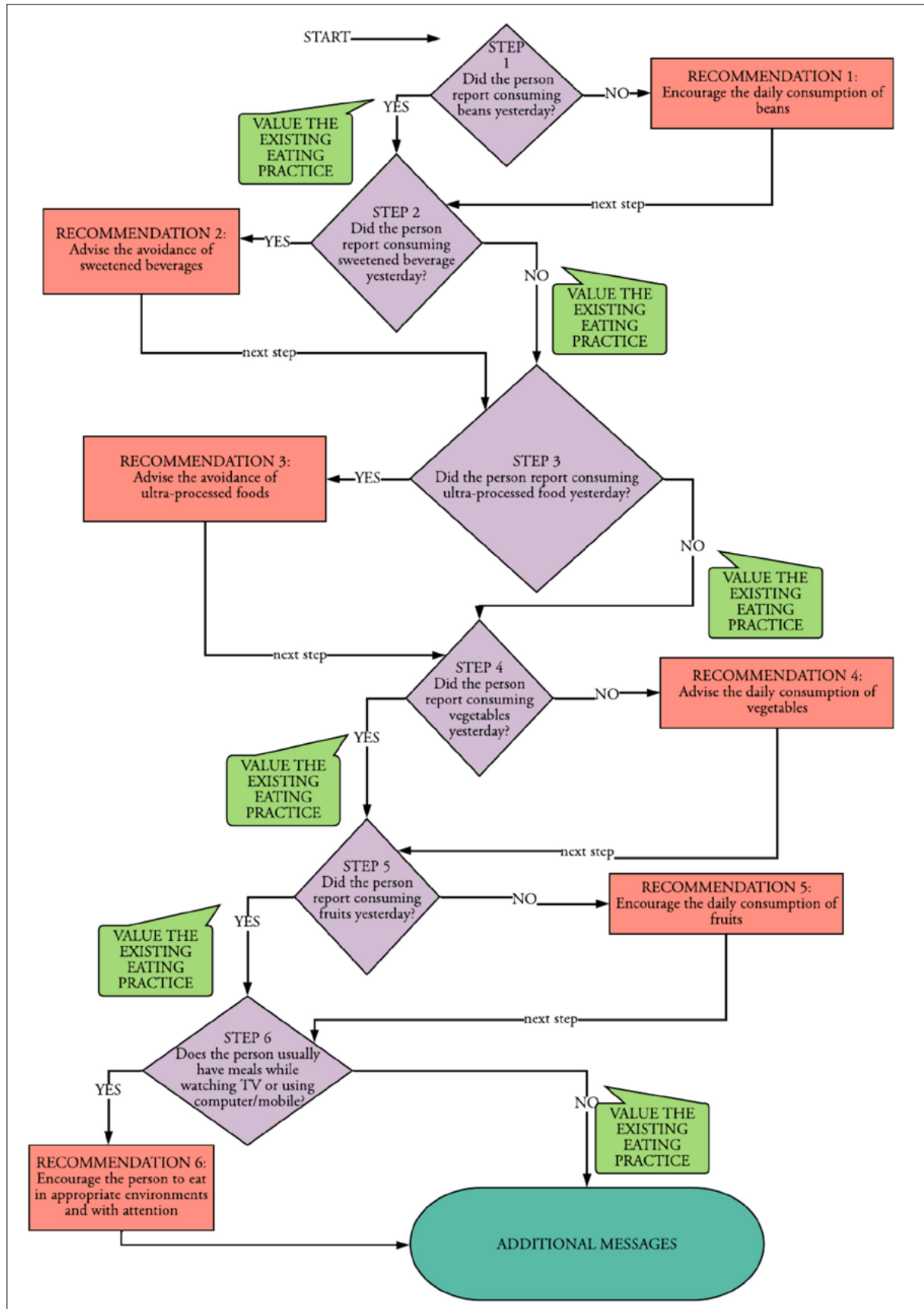


Figure 1. Directional flowchart of conduct for dietary guidelines for the elderly. São Paulo, 2020.

Chart 1. Summary of the main studies included in the literature review on food consumption and associated factors in the elderly. São Paulo, 2020.

Author, year, type of study and survey	Objective and Population	Main results of interest
Almeida MGN, Nascimento-Souza MA, Lima-Costa MF, Peixoto SV. 2020. Transversal. Longitudinal Study on Health and Welfare of Brazilian Elderly (ELSI-Brasil).	To assess associations between unhealthy lifestyle factors (individual and combined) and sex-stratified multimorbidity in Brazilians aged 50 or over.	More than 80% of the elderly had insufficient intake of fruits and vegetables, in both sexes, with or without multimorbidity.
Bezerra I, Gurgel AOC, Barbosa RGB, Junior GBS. 2018. Transversal. National Health Survey - 2013/2014	To describe healthy and unhealthy eating behaviors among Brazilian young and old adults.	Elderly people had higher habitual intake of fruits and fruits and/or juices compared to young adults (18 to 39 years old) and middle-aged adults (40 to 59 years old), in both sexes.
Costa MFFL, Peixoto SV, César CC, Malta DC, Moura EC. 2009. Transversal. VIGITEL (Surveillance of Risk and Protection Factors for Chronic Diseases by Telephone Survey)	To estimate the prevalence of harmful health behaviors and other cardiovascular risk factors among elderly people with self-reported hypertension and comparing them with non-hypertensive individuals.	Prevalence of insufficient intake of fruits and vegetables, addition of salt to meals and consumption of meat with excess fat did not differ significantly between hypertensive and non-hypertensive individuals, even when analyzed separately by sex.
Firno JOA, Peixoto SV, Loyola Filho AI, Souza-Júnior PRB, Andrade FB, Lima-Costa MF, Mambrini JVM. 2019. Transversal. Longitudinal Study on Health and Welfare of Brazilian Elderly (ELSI-Brasil).	To quantify the contribution of selected health behaviors (physical activity, dieting and smoking habits) to the control of blood pressure levels in a national sample representative of the population aged 50 and over.	17% of individuals indicated eating vegetables and fruits regularly. When analyzing the prevalence of hypertension control according to the adoption of health behaviors, it was observed that this control was greater among the men who reported regular intake of vegetables and fruits (57%).
Dourado DAQS. 2015. Transversal. Health, Wellness and Aging Study (SABE)	To verify the association between metabolic syndrome and eating patterns in elderly people from the city of São Paulo participating in the SABE study, in 2010.	The inadequate pattern was significantly associated with male sex, schooling years greater than 8, alcohol consumption, physical inactivity and absence of NCDs. The modified pattern was significantly associated with female sex, aged between 64 and 69 (cohort B), schooling years greater than 8, never having smoked and having 3 or more NCDs. The traditional Brazilian pattern was significantly associated with age between 60 and 64 years old (cohort C). The beneficial pattern was significantly associated with education and never having smoked.

to be continued

Continuation of Chart 1

Author, year, type of study and survey	Objective and Population	Main results of interest
Marucci MFN. 2018. Transversal. Health, Wellness and Aging Study (SABE)	To compare the nutritional status and food intake of two cohorts (2000 and 2010) of the elderly (60 to 64 years old) participating in the SABE study, according to gender.	Elderly people in the 2010 cohort had a higher prevalence ratio for consuming 3 or more meals/day and 5 or more glasses of liquids/day; and lower prevalence ratio for dairy products, meat and fruits and vegetables. Among women, the prevalence ratio was higher for consumption of 3 or more meals/day and lower for meat consumption; among men, the prevalence ratio was higher among those in the 2010 cohort for consumption of 3 or more meals/day and 5 or more glasses of liquids/day and lower for consumption of dairy products and fruits and vegetables ($p < 0,05$).
Moura CSS. 2012. Transversal. SABE study: Health, Wellness and Aging Study	To verify the association between the eating behavior of elderly people living in the city of São Paulo and sociodemographic and cultural variables.	82% of the elderly reported intake of dairy products at least 1x/day. 94% reported intake of eggs, beans or lentils at least 1x/week. 92% reported intake of meat, fish or poultry at least 3x/week. 83% reported intake of fruits or vegetables at least twice a day. 58% reported drinking liquids in amounts less than or equal to 5 glasses/day. 68% reported not drinking alcohol in the last 3 months. 67% of the elderly reported having 3 or more meals/day. 82% reported the habit of preparing a hot meal. 85% reported the habit of buying food.

Source: Own elaboration, 2020.

Additionally, information from technical materials published by the Ministry of Health²⁻¹⁴, and the 2017-2018 POF report, also supported the preparation of the protocol.

The literature review showed that the triple burden of diseases characteristic of this phase of life influences the eating habits of the elderly. The included studies showed insufficient intake of fruits and vegetables and habits of adding salt to ready-to-eat foods and consumption of meat with excess fat. On the other hand, the influence of reduced functional capacity was also identified, such as difficulties in locomotion, chewing and swallowing, changes in taste, smell, vision and cognition, in addition to social changes with a possible reduction in family income and support network for care, in the elderly eating habits and practices.

According to the 2017-2018 POF, the elderly eating pattern was mainly characterized by the consumption of *in natura* or minimally processed foods (56.9% of total energy), mainly rice (11.1%), meat (7.1%) and beans (6.7%). However, there was an insufficient intake of fruits and vegetables, which represented, respectively, 5.0% and 2.2% of the total energy consumed. Ultra-processed foods, in turn, contributed with about 15% of the calories consumed, especially margarine (2.6%), industrialized bread (2.4%) and cookies and “package” snacks (2.2%), followed by cold cuts and sausages (1.2%), sweet biscuits (1.1%) and sweets (1.0%)²⁵.

Based on these results, the dietary guidelines messages were elaborated considering the needs of the elderly and the possible difficulties found in this cycle to adhere to the recommendations.

Protocol validation

Version 1 of the protocol, submitted to content validation by a panel of experts, in June 2020, had 17 participants, all women, with complete higher education in nutrition (12), medicine (3), nursing (1) or physiotherapy (1) and working in teaching and research, public management or health care.

All protocol components had an average CVI above the cut-off point (0.80). Even so, all contributions from experts in each component were analyzed individually. Out of the 29 components evaluated, 21 obtained total agreement (CVI = 1.0) for clarity and 17 for relevance (Table 1). According to the evaluators, the components that most needed changes were: “Introductory text”, “How to use the protocol?”, “Assessment of food consumption”, “Flowchart”, “Recommendation 1” and “Recommendation 6”.

Table 1. Description of the content validity index by the protocol component to use the Food Guide for the Brazilian Population in the dietary guidelines for elderly people, São Paulo, 2020.

Component	Content Validity Index (CVI)		
	Clarity (min-max)	Relevance (min-max)	Average CVI
Introductory Text	0.82 (2-4)	0.94 (2-4)	0.88
How to use the protocol?	0.88 (2-4)	1.00 (3-4)	0.94
Food consumption assessment	1.00 (3-4)	0.94 (2-4)	0.97
Flowchart	1.00 (3-4)	0.94 (2-4)	0.97
Recommendation 1- Guideline	1.00 (3-4)	0.94 (2-4)	0.97
Recommendation 1 - Suggestions for variations	1.00 (3-4)	0.94 (2-4)	0.97
Recommendation 1 - Reason	1.00 (3-4)	1.00 (3-4)	1.00
Recommendation 1- Obstacles	1.00 (3-4)	0.94 (2-4)	0.97
Recommendation 2 - Guideline	1.00 (3-4)	1.00 (3-4)	1.00
Recommendation 2 - Suggestions for variations	1.00 (3-4)	1.00 (3-4)	1.00
Recommendation 2 - Reason	1.00 (3-4)	1.00 (3-4)	1.00
Recommendation 2- Obstacles	1.00 (3-4)	1.00 (3-4)	1.00
Recommendation 3 - Guideline	1.00 (3-4)	1.00 (3-4)	1.00
Recommendation 3 - Suggestions for variations	1.00 (3-4)	0.94 (2-4)	0.97
Recommendation 3 - Reason	0.94 (2-4)	1.00 (3-4)	0.97
Recommendation 3 - Obstacles	1.00 (3-4)	1.00 (3-4)	1.00
Recommendation 4 - Guideline	1.00 (3-4)	1.00 (3-4)	1.00
Recommendation 4 - Suggestions for variations	0.94 (2-4)	0.94 (2-4)	0.94
Recommendation 4 - Reason	1.00 (3-4)	1.00 (3-4)	1.00
Recommendation 4 - Obstacles	0.94 (2-4)	0.94 (2-4)	0.94
Recommendation 5 - Guideline	1.00 (3-4)	1.00 (3-4)	1.00
Recommendation 5 - Suggestions for variations	0.94 (2-4)	0.94 (2-4)	0.94
Recommendation 5 - Reason	1.00 (3-4)	1.00 (3-4)	1.00
Recommendation 5 - Obstacles	1.00 (3-4)	1.00 (3-4)	1.00
Recommendation 6 - Guideline	1.00 (3-4)	0.88 (2-4)	0.94
Recommendation 6 - Suggestions for changing habits	1.00 (3-4)	0.94 (2-4)	0.97
Recommendation 6 - Reason	1.00 (3-4)	1.00 (3-4)	1.00
Additional Guidelines	0.88 (2-4)	1.00 (3-4)	0.94
Practice Appreciation	1.00 (3-4)	1.00 (3-4)	1.00

Source: Own elaboration, 2020.

Some suggestions made by the experts and which were incorporated into the protocol are shown in Chart 2. In addition to suggestions for changes and comments on the relevance, clarity and applicability

of the protocol, the experts brought elements about functionality, nutritional needs and eating habits of the elderly, support network and conditions of access to food.

Chart 2. Theme of suggestion and its definition, example of suggestion and example of protocol change, São Paulo, 2020.

Suggestion theme and definition	Suggestion example	Example of change made to the protocol
Clarity: Suggestions for adapting the technical terms used, improving phrases and defining the profile of the elderly to direct the guidelines.	"We know that the audience for this protocol of use is the elderly, but we suggest including the reference in years (individuals above 60 years old or over), at the beginning of the material".	"This group of individuals includes those aged 60 and over."
Functionality: Suggestions related to physiological changes in the elderly (smell, vision, taste, chewing, swallowing, intestinal function, appetite, loss of muscle mass), comorbidity, cognitive condition of the elderly and autonomy to buy, prepare food, as well as to feed themselves.	"Include something about oral hygiene care - related to taste loss and guidelines for taste preservation in the elderly".	"Remember that oral hygiene care, including brushing the tongue, helps to better feel the taste of food, avoiding excess use of salt and processed seasonings".
Nutritional needs: Suggestions related to specific nutritional needs and for the elderly.	"I believe it will be valid to add how many glasses of water per day, as dehydration is common in the elderly".	"Encourage water intake even not being thirsty. Drinking water is essential to prevent dehydration and constipation, common in this stage".
Support network: Suggestions related to the support network for the elderly, including, in addition to family members and caregivers, health care and health professionals.	"Reinforce that elderly and family caregivers at a time of loss of autonomy can offer an opportunity to raise awareness, discuss solutions and search for healthy choices that meet the elderly particularities and needs".	"In cases of greater clinical complexity and functional fragility, it is necessary to involve a multidisciplinary team, such as the NASF team or specialized secondary care teams, so that the diagnosis and choice of the most appropriate conduct are carried out from the perspective of comprehensive care".
Access and income: Suggestions on access to food and income for the elderly to buy it.	"Consider the socioeconomic issue of the vast majority of elderly PHC users".	"For the elderly person who has difficulty in obtaining financial access to buy food, seek help from social service or other support in the country to face food and nutritional insecurity".
Eating habits and method of preparation: Suggestions related to eating habits and how to prepare food.	"It is important to discuss with the elderly how they prepare beans (addition of sausages)".	"Attention to the amount of salt, salted meat and sausage meats, such as pork sausage, used when preparing beans. Encourage the use of natural seasonings (such as parsley, garlic, onion, basil, black pepper, cumin, bay leaf, mint, jambu, oregano, coriander, rosemary, pepper, tomato, among others) to add flavor to the preparations and reduce the excessive use of salt".

Source: Own elaboration, 2020.

The apparent validation with health professionals, carried out with version 2 of the protocol, had the participation of 9 professionals working in PHC in different regions of the country, including nurses (3), doctors (3), psychologists (2) and dentists (1) and took place in August 2020. Thematic analysis of the focus group transcripts identified two analysis categories: (1) applicability of the protocol in the life stage and (2) applicability of the protocol in the work routine in PHC. In general, the professionals considered the protocol applicable in individual appointments with the elderly assisted in the Brazilian PHC.

One professional recognized the protocol as an educational tool and reinforced that, as challenging as it may seem to promote changes in eating habits in the elderly, he can already see its application in this life stage.

“It’s about valuing the food practice and guiding what he needs to reeducate. [...] Reeducating is not something common in the plans of an elderly person, right? It’s hard for us to have that kind of approach with them, but yes, I can already see people using it. I think it will be really welcome on a day to day basis.” P1

Another professional expressed satisfaction with the protocol structuring and argued that the use of justification to explain and reinforce the recommendation given in the protocol is essential to help change behaviors in this period.

“I’m going to tell this old man not to eat the sweets he has eaten his whole life and he’s never done him any harm. He’s going to leave and he didn’t see the point of it. So, when you explain the reasons, how beneficial this food is, how much it impacts the body, how much it reverberates across the general context of health, he feels part of this conversation [...]. So justifying it makes sense. Then we can do, eat things that maybe we don’t like, don’t want, but because we saw meaning in that and that will have an impact in the future. So I really like the justification part.” P2

Regarding the protocol application in the work routine, a professional pointed out that the protocol

can be used in the appointment as long as there is enough time.

“When [the professional] manages to access an elderly person in an appointment or in a spontaneous demand with a little more time to apply the markers on Sisvan, I think we have to get that time with him. So, I don’t think it’s bad for us to be able to apply [the protocol] as a whole, because it’s saving time with this person. Because, perhaps, the professional can no longer have him in the appointment schedule with as much time as there is for other health conditions in the unit.” P3

At the end of this step, the final version of the protocol for the use of the Food Guide for the elderly was elaborated, published by the Ministry of Health²⁶.

DISCUSSION

The protocol development and validation process demonstrated the relevance of an instrument to support the individual clinical practice of PHC health professionals at SUS. The protocol was well assessed as to clarity and relevance by experts, justifying its purpose. In addition, the experts indicated that the instrument achieved its objective by synthesizing the recommendations from the Food Guide, contemplating the specificities of the elderly, such as functionality, nutritional needs and support network. The panel with health professionals indicated the feasibility of using the protocol and its potential to be applied in the work routine in different regions of the country, qualifying the dietary guidelines for the elderly in PHC.

This is the first study in the country to date that seeks to develop and validate a protocol for dietary guidelines for the elderly in the PHC context. Previous efforts in the perspective of promoting healthy eating were invested from the incorporation of the Food Guide messages in the 10 steps for healthy eating for the elderly, contained in the “Elderly Card”¹⁴. However, the 10 steps are configured as an educational instrument, not meeting the need for a protocol for dietary guidelines based on the assessment of individual food consumption.

It is also noteworthy that most of the protocols related to the elderly diet are related to a specific disease, or yet designed to the bedridden or hospitalized elderly^{6,27,28}. In this sense, the protocol described in this study is innovative as it proposes to support guidance for a health practice that promotes healthy aging, healthy eating and comprehensive care based on food diagnosis and provides technical support to health professionals, which can contribute to the use of the Food Guide recommendations in clinical practice in PHC.

In addition, the protocol contributes to giving value to the SISVAN food consumption markers form, which still has incipient use coverage in all life stages²⁹. Furthermore, the protocol advances the discussion on the need to think about the dialogic elaboration of clinical-nutritional protocols, to legitimize interdisciplinarity and comprehensive care to promote healthy eating, from the perspective of an expanded clinical practice^{30,31}.

Another innovation of this protocol is the target audience. The protocol seeks to serve as an instrument of dietary guidelines that can be applied by all health professionals with higher education in PHC to promote the health of the elderly. The evaluation of the protocol applicability with health professionals from different categories demonstrated its potential to be used in the service context, contributing to the comprehensive care of the elderly, ceasing the fragmentation of health care at this stage of life^{31,32,33}.

However, although the protocol was well assessed in all aspects investigated, the dense work routine with little time for individual consultation, the lack of permanent education activities that strengthen the incorporation of tools in the work routine and the insufficient induction of management to carry out food and nutrition actions in the teams³⁴ make it difficult to incorporate new tools into the services. In this sense, although the protocol has proven to be relevant and viable for use, continuing education strategies for professional training and support from the three management levels are required to legitimize the implementation of the protocol developed³⁵. As well as new studies to evaluate the implementation of protocols in Brazilian PHC.

As limitations of the study, we highlight that due to the lack of participation of representatives from all Brazilian states in the focus groups, there may be an insufficient representation of all food regionalities found in the country. On the other hand, the participation of representatives from the five Brazilian regions and the extraction of recommendations from the Food Guide (Step 3) contributed to incorporating the food characteristics from different regions around the country. Another aspect is linked to the online format for data collection. The contribution, especially from professionals who participated in the groups after a work day, may have been influenced by the participants tiredness.

Finally, it is noteworthy that the instrument elaborated is not intended to replace the individualized dietary prescription, does not comprise frail elderly people, with a marked decrease in their functional capacity or those with special dietary needs. However, the recommendations for promoting adequate and healthy eating contained in the Food Guide are applicable and benefit all individuals, including the prevention and management of CNCDS, not excluding its use in the dietary guidelines of individuals with associated pathologies.

CONCLUSION

The article presents the protocol elaborating process for the use of the Food Guide for Brazilian Population in dietary guidelines for the elderly. The protocol has the potential to expand the practice of promoting healthy eating and quality of life among SUS elderly people. In addition, it provides clinical support to the different areas of knowledge of PHC health professionals, including geriatrics and gerontology, expanding comprehensive health care, qualifying guidelines on healthy eating and knowledge about the information in the Food Guide. It is noteworthy that for its implementation throughout the country, broad dissemination among managers and health professionals as well as investment in continuing education activities are required.

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