

# Front of pack labeling system for foods and beverages in Mexico: a strategy for healthy decision-making\*

Committee of national academic experts on the front of pack labeling of food and non-alcoholic beverages to achieve better health<sup>‡</sup>

**Comité de expertos académicos nacionales del etiquetado frontal de alimentos y bebidas no alcohólicas para una mejor salud. Front of pack labeling system for foods and beverages in Mexico: A strategy for healthy decision-making. Salud Publica Mex. 2018;60:479-486.**

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## Abstract

The Mexican Ministry of Health commissioned the National Institute of Public Health with constituting a group of independent, conflict-of-interest free academic experts on front-of-pack labeling (FOPL). This group was instructed to create a position paper to contribute to the development of a FOPL system for industrialized products that offers useful information for purchase decision-making. This position paper uses the best available scientific evidence and recommendations from experts of international organizations. The FOPL proposal focuses on the contents of energy (kilocalories), nutrients, ingredients, and components that if consumed in excess, can be harmful to people's health, such as added sugars, sodium, total fat, saturated fat, and energy. The academic

## Resumen

La Secretaría de Salud solicitó al Instituto Nacional de Salud Pública la conformación de un grupo de expertos académicos en etiquetado de alimentos y bebidas, independientes y libres de conflictos de interés, que tuvieran la encomienda de emitir una postura para contribuir al desarrollo de un sistema de etiquetado frontal para productos industrializados que proporcione información útil para facilitar la decisión de compra. La postura utiliza la mejor evidencia científica disponible y recomendaciones de expertos convocados por organismos internacionales. Así, la propuesta de etiquetado frontal se centra en el contenido de energía, nutrimentos, ingredientes y componentes cuyo exceso en la dieta puede ser perjudicial para la salud, como azúcares añadidos, sodio,

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expert group recommends the implementation of a FOPL that provides an easy way to quickly assess the quality of a product. It is essential that this FOPL provides direct, simple, visible and understandable information.

**Keywords:** front-of-pack labeling; regulation; obesity; diabetes mellitus; industrialized foods

grasas totales, grasas saturadas y energía. El grupo recomienda implementar un etiquetado frontal que, de forma sencilla, permita evaluar de manera rápida la calidad de un producto al momento de realizar una compra; por ello, es indispensable que éste proporcione información directa, sencilla, visible y fácil de entender.

**Palabras clave:** etiquetado de alimentos; regulación; obesidad; diabetes mellitus; alimentos industrializados

**N**on-communicable diseases (NCDs) are the leading cause of death in the world. A substantial proportion of NCDs are tied to food and diet, which are modifiable factors that can prevent or reduce the risk of NCDs.<sup>1</sup> At the population level, recommendations have urged for a decrease in energy consumption of saturated fats, added simple sugars, and salt, which are frequently found in processed foods in high quantities that exceed recommended daily intake levels and thereby contribute to disease risk.<sup>2</sup>

Among policies and actions proven cost-effective for controlling obesity and NCDs in the population is guidance on choosing healthy foods through a Front of Pack Labeling System (FOPL) for food and beverages.<sup>3-7</sup> FOPL forms part of a set of policies intended to counter the obesity epidemic, along with other strategies, such as the regulation of foods in school settings and marketing of energy-dense foods directed at children, as well as educational campaigns and taxes on sugar sweetened beverages.<sup>8-12</sup>

It is estimated that over 70% of adult deaths in Mexico are due to NCDs. Evidence shows diet and dietary habits have undergone substantial changes in the past 30 to 40 years, while consumption of energy (kilocalories, kcal) per capita has increased 580 kcal/day globally.<sup>13,14</sup>

Mexico's population has followed the same trend. It is attributed, in large part, to the increase in consumption of processed, energy-dense foods, as well as to other changes in the food system and the country's economic growth.<sup>13</sup>

Recently, estimates indicate over 58% of total energy (kilocalories) consumed by Mexicans is derived from processed foods.<sup>13</sup>

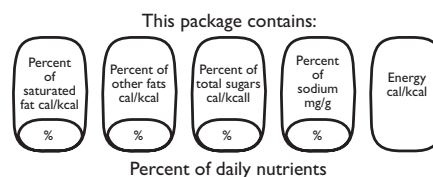
Of 13 Latin American countries, Mexico had the highest retail sale per capita of ultra-processed products in 2013 with 212.2 kg per capita.<sup>15</sup> This trend is associated with the increased prevalence of overweight and obesity, which are considered serious public health issues in Mexico.<sup>16,17</sup>

In the last years, countries such as Chile,<sup>18,19</sup> Ecuador,<sup>20</sup> the United Kingdom, Australia, New Zealand,<sup>21,23</sup> and Israel<sup>24</sup> have implemented a FOPL as a regulatory measure to provide their populations with a quick and simple tool for making purchasing decisions.<sup>25-29</sup> Currently, other countries are in the process of discussing the adoption of a new FOPL system.

In 2010, the National Agreement for Nutritional Health was developed in Mexico. Its aim was to prevent overweight and obesity through diverse measures, such as improving availability of foods and beverages in educational facilities, access to potable water, FOPL, and marketing.<sup>11,30</sup> It was continued in 2013 with the National Strategy for Prevention and Control of Overweight, Obesity, and Diabetes,<sup>31</sup> which led to a regulatory measure on FOPL that went into effect in 2015. This measure requires diverse food items to have a label known as the Guideline Daily Amount (GDA) (figure 1).<sup>32</sup>

GDA labels are based on a FOPL system proposed in Europe<sup>33</sup> and developed at the Institute of Grocery Distribution. This organization's research is financed by the food, beverage, and convenience store industries.<sup>33</sup>

GDA labels indicate the quantity and percentage of saturated fats, other fats, total sugars, sodium, and energy (in kcal) per package and per serving, as well as a caption for percent of daily nutrients. From a public health stance, this information is considered crucial. However, the reference values are based on a diet of



Source: Campos S and colleagues, 2011<sup>29</sup>

**FIGURE 1. GUIDELINE DAILY AMOUNT LABEL (GDA). MEXICO, 2018<sup>29</sup>**

2,000 kcal, which corresponds to an adult woman who does moderate physical activity.<sup>33</sup>

This labeling system has been evaluated in distinct ways, looking to identify how it is utilized, understood, and its usefulness as a public health strategy. Nonetheless, the results have proved dismal. In 2011, a group of researchers at the National Institute of Public Health in Mexico (INSP for its acronym in Spanish) tested comprehension of the GDA among college students majoring in nutrition and found that even this group struggled to interpret the information on the labels.<sup>34</sup> Similar results have been found in studies conducted by developed countries, which have populations with a greater education level. This suggests that the GDA is exceedingly limited in its ability to guide consumption decisions in general.<sup>35,36</sup>

Among evaluations of the GDA's comprehension conducted since 2011 is a study carried out by the United Nations Children's Fund (UNICEF), in collaboration with institutions from various Latin American countries. This study also found the GDA is exceptionally difficult to adequately understand.<sup>37</sup> Likewise, the 2016 National Health and Nutrition Survey (ENSANUT) included a module to evaluate the label and found low use and understanding among the population.<sup>39</sup> This corroborates the previously mentioned finding, at a time when the Federal Commission for the Protection against Sanitary Risk (COFEPRIS) had not yet included this FOPL system as part of the Official Standard. Recently, a book published by the UK Health Forum describes the conflicts of interest that were present in Mexico at the time the GDA was adopted.<sup>40</sup> Of those identified, one of the most concerning was that experts were not consulted in the process and there was insufficient scientific evidence prior to its implementation.

Approximately during the same time, Chile developed a simple and understandable FOPL that has shown promising results in initial evaluations (figure 2).<sup>18,19,41,42</sup> This FOPL system is known for its use of warning labels,

given that it quickly informs consumers of excess energy, nutrients, and ingredients in foods whose excessive consumption is associated with various NCDs.<sup>41</sup> Other countries have joined these efforts and are developing their own warning labels, including Brazil,<sup>43</sup> Peru,<sup>44</sup> and Canada.<sup>45</sup> Furthermore, the Pan American Health Organization (PAHO) has declared this FOPL system a best practice and proposes adopting it in the region.\*

Currently, a study led by the University of Waterloo, in collaboration with INSP, conducted a nationally representative randomized trial with 4,057 adults in Mexico that tested comprehension of FOPL systems, such as the GDA and the Chilean warning label.<sup>‡</sup> Results showed that only 6% of participants considered labels in general easy to understand, although 72% reported frequently seeing them on food packages. Low income participants had low use and low understanding of the GDA and report it has little influence on their selection of products ( $p < 0.01$ ). On the other hand, 83% considered the Chilean warning label easy to understand versus only 54% for the GDA and 51% for the health star system. Lastly, 89% of participants noted they would support a government policy that required the use of this kind of label on food products. These findings are consistent with evidence that shows GDA labels have the lowest understanding and generate significant disparities in low income populations,<sup>39</sup> and that warning labels are easier to comprehend and more effective in general.<sup>46</sup>

The INSP is currently developing a randomized trial that compares these two FOPL systems in a virtual shopping module.<sup>§</sup> Given the urgent need for sound



Source: Rincón-Gallardo PS and colleagues, 2016<sup>37</sup>

**FIGURE 2. CHILEAN FRONT OF PACK LABELLING SYSTEM: WARNING LABELS FOR PRODUCTS THAT EXCEED THE MAXIMUM QUANTITIES OF CRITICAL INGREDIENTS. CHILE, 2016<sup>37</sup>**

\* Da Silva F. Front-of-package labeling system for improved nutrition. Evidence, policy and action. Washington, DC: OPS, 2017.

‡ Hammond D, Barquera S, Jáuregui A, Nieto C, Contreras A, Illezcas D. International Food Policy Study: Preliminary findings on nutrition labelling in Mexico, March 2018. Datos no publicados.

§ Jáuregui A, Velasco A, Rivera JA, Vargas JL, Contreras AG, Barquera S. Etiquetado frontal nutrimental de alimentos industrializados para consumidores mexicanos. 2016.

policies and strategies that contribute to better diets and nutrition in the population (due to the serious challenge posed by the obesity epidemic), the present group proposes a basic position to serve as a starting point in the process to identify a useful FOPL to guide Mexicans in their food choices.

On November 21st, 2017, the Ministry of Health commissioned INSP with constituting a group of independent, conflict-of-interest free academic experts on FOPL. This group was instructed to create a position paper to contribute to the development of a FOPL system for industrialized products that offers useful information to facilitate purchase decision-making, identifying energy contents and nutrients and ingredients whose excessive consumption can be harmful to one's health. These include added sugar, sodium, total fats, saturated fats, and energy (kilocalories). After reviewing the available national and international bibliography and convening diverse working sessions, this group has developed the following position. It recommends the Ministry of Health and COFEPRIS adopt a FOPL that facilitates healthy decision-making in the population, making sure it rightly serves its purpose. Implementation should be as soon as possible.

### Expert position

1. The FOPL should be based on international and national health recommendations, like those from the World Health Organization (WHO), PAHO, and National Academy of Medicine, as well as the nutritional recommendations prepared by the health sector under the leadership of the National Institute of Medical Sciences and Nutrition Salvador Zubirán. The system should not be based on inconsistent, poorly supported recommendations, as is currently the case for certain diet components.

International and national organizations have made evidence-based recommendations on nutrition requirements for consumption in diverse populations. The recommendations serve as a reference to plan and evaluate diet; some values are different depending on individual characteristics and population characteristics, considering specific trends in morbidity and mortality. In Mexico, specific nutrition recommendations for the Mexican population have existed for over 40 years.<sup>47</sup>

2. A conflict-of-interest free group should design the FOPL system in Mexico, abiding by transparency criteria

Safeguarding policy decisions from conflict of interest is a common practice around the world. However, in Mexico, the participation of corporations in health policy decisions in the form of chambers, unions, interest groups, and civil society groups they finance is common. The WHO recognizes this as a problem that must be addressed and recently published guidelines.<sup>48</sup> Urgent action is needed to shield health policy decisions from commercial interest and influence, in compliance with WHO's guidelines.

3. It is fundamental to consider a unique nutrient profile for FOPL policies, in conjunction with restrictions on the promotion and sale of foods in schools and marketing regulations to support the congruency, consistency, and ease of implementation of the label.

In Mexico, the existing regulations use different nutritional criteria that depend on the purpose for which they were created. In Chile, for example, products with warning labels cannot be advertised on television during peak watching hours for children; in other words, the diverse regulations are coordinated.

In order to make an educational strategy congruent, in this case the FOPL, it is essential that this label/nutrient profile be utilized for all regulations whose aim is to protect the population from unhealthy products. This includes access to these products in schools and their marketing and commercialization around schools, as well as marketing directed at children in all media outlets and points of purchase.

As of 2010, the *General guidelines for the sale or distribution of foods and beverages in elementary and middle schools*<sup>49</sup> were implemented in all public and private elementary and middle schools in Mexico. They establish the recommended quantities of energy and nutrients in school foods for pre-school, elementary, and middle school students. This is done in an effort to promote a correct diet and the acquisition of healthy habits and behaviors in schools. In addition, the maximum recommended quantities of kilo calories, added sugar, sodium, and of total, saturated, and trans fat for each food group are also defined. The guidelines emphasize nutrients that are associated with the development of overweight, obesity, and NCDs. The basis of the guideline's foundation was the review conducted by WHO in 2002 on diet, nutrition, and prevention of NCDs<sup>2</sup> and the review published by the World Cancer Research Fund in 2007 on diet, nutrition, physical activity, and cancer prevention.<sup>50</sup>

On the other hand, in 2014, guidelines were published on nutritional and marketing criteria that food

and non-alcoholic beverage advertisements should follow when promoting their products on open and restricted television, as well as in movie theatres.<sup>51</sup> The same year, the Agreement by which the Guidelines are issued was published and stated in Article 25 of the Regulation for Sanitary Control of Products and Services, which should be followed by producers of pre-packaged foods and non-alcoholic beverages in regards to the information displayed on the frontal area of the product, as well as the criteria and characteristics for securing and using the nutritional logo referred to in Article 25 bis of the Regulation.<sup>32</sup> In the case of the FOPL, the Guidelines took effect in 2015 and ever since, the GDA label has been utilized (figure 1).

4. The nutrition label's emphasis should be exclusively on providing information that is easy to understand on ingredients whose high consumption is harmful for health: Sugar, saturated fats, trans fats, sodium, and total energy.

The energy content, total fats, saturated fats, sodium, and total sugar is considerably high in many industrialized products and is associated with the development of NDCs.<sup>2</sup> There is convincing evidence that their elevated consumption contributes to increased risk for disease. The energy contribution of ultra-processed foods constitutes 30% of the Mexican diet—the greatest being from sugar sweetened beverages, snacks, and sweets.<sup>52</sup> Consumption of ultra-processed foods is highest in preschoolers (38.6%) and adults (26.2%).<sup>52</sup>

Given current scientific evidence, the morbidity and mortality profile of the Mexican population, and the projections made on consumption changes of industrialized products,<sup>53-55</sup> it is important that the FOPL contain clear information on the content of these elements. Likewise, the accuracy of this information speaks to the need to protect the right to health and food and the rights of the consumer guaranteed by the Mexican Constitution<sup>56</sup> and the Federal Law for Consumer Protection.<sup>57</sup>

The latter is clear in underscoring basic principles that are impaired, including the protection of consumers' life, health, and safety against the risks caused by harmful products or services; their freedom to choose products with an basis in education and appropriate information on consumption; and protection against misleading advertisements.<sup>57</sup>

Other countries have a FOPL that considers not only ingredients or harmful components for health, but also those that can have beneficial effects, such as vitamins, inorganic nutrients, and fiber. Given the importance of simplifying the FOPL system and making it easier to understand for the population, we consider it funda-

mental to maintain emphasis only on the components the WHO recommends giving attention to.

5. Available studies indicate the FOPL used in Mexico, which is based on the GDA, does not work and should be replaced by an effective system with correct criteria.

Studies developed in Mexico demonstrate that the current label is difficult to understand for most of the population, including the highly educated.<sup>34,37,39,58</sup> Furthermore, 10% of the population cannot read or struggle with reading comprehension and therefore, do not have access to the information contained in the labels of industrialized products.<sup>39</sup> The GDA system uses inaccurate reference values for the maximum limits of ingredients or present components that lack a scientific basis.<sup>7,47</sup> The label was designed without participation of free-of-conflict nutrition experts.<sup>40</sup> Moreover, there is no evidence that the present label is understandable or that it contributes to making healthier decisions. Another problem is that it uses arbitrary portions that, when manipulated, can disguise high quantities of unhealthy ingredients in the products.

6. Consistent with international efforts in the region, which are based on the best available knowledge and consider recommendations from PAHO and UNICEF, an international group of experts supported by more than 11 national and international professional health organizations (including the *World Heart Federation*, *InterAmerican Heart Foundation*, and the *World Obesity Federation*, among others) considers that a warning label for critical ingredients, similar to the one proposed in Chile, Brazil, Peru, and Canada, is needed in Mexico for the following reasons:

- It has the best scientific evidence on its ease of comprehension
- It is the most understood FOPL in the Mexican population
- Being simpler, it allows for decisions to be taken in a matter of seconds
- There is evidence that it can be understood by children
- It is recommended by PAHO and other national and international organizations
- It has been shown to contribute to making healthier choices
- It has been shown to promote the reformulation of unhealthy products in shorter time
- It contributes to the protections of the right to food secured by the Constitution since 2011.<sup>56</sup>

## In summary

Available results of investigations conducted in Mexico and other countries make it clear that people have difficulty comprehending the current GDA and that a simpler FOPL would be preferable to rapidly evaluate the quality of a product. Developing a label that facilitates healthy choices can create synergy with other public policies and effectively contribute to reaching a better diet and nutrition in the population. The position uses the best available evidence and recommendations from experts convened by international organizations. Nonetheless, as with other educational strategies, it is desirable that new studies allow for the gradual refinement of the FOPL system and make it more effective for the population.

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