Summary

Mexico’s obesity prevalence is one of the world’s highest. In 2006, academics, and federal and state government agencies initiated efforts to design a national policy for obesity prevention. The Ministry of Health (MOH) established an expert panel to develop recommendations on beverage intake for a healthy life in 2008. Subsequently, the MOH, with support from academia, initiated the development of the National Agreement for Healthy Nutrition (ANSA). ANSA was signed by all relevant sectoral actors in 2010 and led to initiatives banning sodas and regulating unhealthy food in schools and the design of other yet to be implemented initiatives, such as a front-of-package labeling system. A main challenge of the ANSA has been the lack of harmonization between industry interests and public health objectives and effective accountability and monitoring mechanisms to assess implementation across government sectors. Bold strategies currently under consideration include taxation of sugar-sweetened beverages, improvement of norms for healthy food in schools, regulation of food and beverage marketing to children and implementation of a national front-of-pack labeling system. Strong civil society organizations have embraced the prevention of obesity as their goal and have used evidence from academia to position obesity prevention in the public debate and in the government agenda.

Keywords: Health policy, Mexico, national programmes, obesity.

Introduction

An estimated 75% of all deaths in Mexico are caused by noncommunicable diseases (NCDs), and obesity and unhealthy diet were among the six main risk factors for mortality in 2010 (1). Projected healthcare costs of 13 obesity-related diseases in 2013 were estimated at US$880 million, with alarming projections for the next few years. According to this study, if an effective policy does not control this trend, in only 7 years, direct healthcare costs will rise above US$1 billion (2).

The prevalence of obesity in Mexico has been estimated from a number of national surveys implemented by the Ministry of Health (MOH) and the National Institute of Public Health (INSP). Varying age–gender groupings were collected in the 1988, 1999, 2000, 2006 and 2012 national surveys. We combined these surveys to present an overall picture of trends in overweight plus obesity (OW + O) across time and the various age–gender groupings. We used the World Health Organization (WHO) definitions for risk of OW + O in children under 5 years (y) and OW + O in children 5 years and older and adolescents (>1 standard deviation [SD] of the body mass index [BMI] 2006 WHO growth standards) (3) and the conventional cutoff point of BMI ≥ 25 for adults. We use a common indicator, shifts in the percentage points annualized (population prevalence change per year). The prevalence of OW + O among children under 5 years increased from 26.6% to 33.6%
between 1988 and 2012 (0.3 percentage point per year), that among children 5–11 years increased from 28.2% to 36.9% between 1999 and 2012 (0.7 percentage point per year), and that among girls 5–11 years increased from 25.5% to 32.0% between 1999 and 2012 (0.5 percentage point per year). Among female adolescents (12–19 years), the combined OW + O grew from 11.1% to 35.8% between 1988 and 2012 (1.0 percentage point increase per year), and among male adolescents (12–19 years) the combined OW + O grew from 33.0% to 34.1% between 2006 and 2012 (0.2 percentage point increase per year). Among adult women (20–49 years) it increased from 34.5% to 70.6% between 1988 and 2012 (1.5 percentage points per year), and among adult men (≥20 years) it increased from 60.7% to 69.4% between 2000 and 2012 (0.7 percentage point per year) (4–6).

While no decline has been observed in spite of some attempts to control the problem, the rate of increase has dropped among adults in recent years, with an annual increase of 0.2% per year in women and 0.5 in men for the 2006–2012 period, and that among children 5–11 years increased from 25.5% to 32.0% between 1999 and 2012 (0.5 percentage point per year). Among female adolescents (12–19 years), the combined OW + O grew from 11.1% to 35.8% between 1988 and 2012 (1.0 percentage point increase per year), and among male adolescents (12–19 years) the combined OW + O grew from 33.0% to 34.1% between 2006 and 2012 (0.2 percentage point increase per year). Among adult women (20–49 years) it increased from 34.5% to 70.6% between 1988 and 2012 (1.5 percentage points per year), and among adult men (≥20 years) it increased from 60.7% to 69.4% between 2000 and 2012 (0.7 percentage point per year) (4–6).

With these surveys we have been able to identify the regional distribution of obesity and the association with other risk factors, sex, age group and socioeconomic status. Some of the main conclusions of these studies are summarized in Table 1A.

To understand the environmental drivers of the increase in the prevalence of obesity and mortality attributed to NCDs in Mexico, the INSP analysed national income and expenditure surveys and other databases to explore trends and patterns in food expenditure, transportation, leisure time activities, and other factors associated with obesity and NCDs. One of the first findings (2002) was a dramatic rise in consumption of sugar-sweetened beverages (SSBs). Between 1984 and 1998 we found significant decreases in expenditures on some food groups, such as fruits and vegetables (−29.3%), dairy products (−26.7%), and meats (−18.8%), and an increase in expenditures on refined carbohydrates and sugars (6.3%) together with a very high increase in expenditures on SSBs (37.2%) (8). These studies identified important changes associated with the nutrition transition that are summarized in Table 1B.

In this context researchers from the MOH identified the urgent need to develop and implement programmes to control the increase in the prevalence of OW + O. In contrast with the comprehensive undernutrition, vaccination...
Table 1  The obesity problem in Mexico, nutrition transition–related factors, and opportunities for action

A. Characteristics of obesity in Mexico identified from surveys and mortality registries

1. Obesity is a highly prevalent health problem in all regions, age groups, and genders in Mexico (31).
2. The increasing obesity prevalence trends in 1999–2006 were among the highest documented in the world (32). However, between 2006 and 2012, this trend increased at a lower rate, probably because of a saturation of susceptible population effect (33).
3. Obesity’s prevalence is increasing at more alarming rates in the most vulnerable populations, such as those living in poverty and children (34).
4. Mortality associated with obesity is a significant percentage of the total national mortality (12.2%) (35).
5. The generalized obesity problem appeared in Mexico before the undernutrition problem was solved, and they still coexist. Undernutrition still affects important sectors of the country (36).
6. Obesity coexists with undernutrition within the most vulnerable communities of the country, within households, within families, and even within individuals (e.g. obesity with iron deficiency) (37).
7. Health expenditure is increasing at a significant rate because of obesity, and even small reductions in the prevalence of this condition would mean notable savings to the country (38).

B. Changes in the Mexican diet associated to the nutrition transition

1. Increase in the availability of low-cost processed foods with high quantities of sugar, fat and sodium (8).
2. Increase in fast food consumption and food consumption outside the home for a growing sector of the population (39).
3. Decrease in available time for food preparation (8).
4. Significant increase in exposure to food and beverage marketing and to technology that decreases physical activity (40).
5. Increase in per capita income (38).
6. Increase in the availability and supply of ready-to-eat foods and processed foods in general (41).

C. Identified opportunities for action that could contribute to obesity prevention policies

1. Mexico is among the countries with the highest consumption of caloric beverages in the world. Caloric beverages contribute 20–23% of the total energy intake in the population (14,15).
2. Children spend only a few hours at school (about 4.5 h per day), but they have many opportunities to eat unhealthy energy-dense foods while there (42).
3. Food and beverage marketing to young children is not regulated to protect this vulnerable sector of the population (43).
4. Nutrition literacy is poor among the general population. Current labeling schemes are not useful, and the current Guideline Daily Amounts are confusing and misleading. There is a clear need for a labeling system that promotes better nutritional choices for the population (44).
5. Physical activity is very low across the country. Physical inactivity prevalence has increased since 2006 (45).

and infectious diseases programmes in Mexico, very little was known about obesity-related NCD prevention (9,10). Diverse intervention opportunities were identified from the preliminary descriptive studies (Table 1C).

Thus, in 2006 various institutions, including the INSP, the Mexican Social Security Institute (IMSS), one of the three main health systems in Mexico covering about one-third of the Mexican population, and other federal and state government agencies, initiated efforts to design a national policy for the prevention and control of obesity- and nutrition-related diseases. The objective of this paper was to briefly describe some of the main efforts in Mexico to control the problem and the processes and challenges involved.

Attempts to tackle obesity

In 2005, in response to the increase in obesity in Mexico and the high mortality rates attributable to obesity-related diseases, some important programmes were put in place. Mexico was invited to the Bellagio Conference on the nutrition transition (11) and to the Inter-American Economic Forum (12) to prevent obesity. Later, the U.S. Institute of Medicine and the INSP of Mexico conducted a workshop on preventing obesity in children and youth of Mexican origin on both sides of the United States–Mexico border (13). This consensus recognized the need to focus on prevention and use a multifaceted approach and highlighted the importance of targeting children, because interventions on other age groups had not achieved positive results at the time of the workshop. Also the IMSS started its own preventive programme (PrevenIMSS) with a significant investment in the media, including TV advertising, but there was little coordination with similar actions developed by the other two main health systems in Mexico (the MOH and the system covering government employees). Although the PrevenIMSS programme achieved recognition among the population, investing in a unified national campaign that included the three main health systems would have produced even more noticeable and sustainable results.
Mexican beverage guidelines for healthy hydration

In 2007, using a recent national survey (ENSANUT 2006), we analysed beverage consumption trends between 1999 and 2006 among children, adolescents and adults. We documented that over 20% of the total energy intake in the Mexican population was provided by beverages. Moreover, a very high increase in consumption of caloric beverages for the 1999–2006 period was documented (226% increase among children and adolescents and 252% among adults) (14,15). The 2006 survey documented a significant contribution of sodas to total energy intake starting at 12 years of age. In addition there are many other caloric beverages in the Mexican diet, such as fruit juices, sugar-sweetened coffee and sugar-sweetened flavored drinks (such as lemonade and hibiscus- or rice-flavored drinks, called aguas frescas). Using this evidence and international studies associating SSB consumption with obesity, scholars proposed actions to promote water consumption as the best hydration alternative.

Responding to concerns about the increasing rates of obesity and chronic diseases and given that SSB consumption was already a known risk factor for obesity, the MOH in 2008 established an expert panel to develop recommendations on beverage intake for a healthy life (16). This panel conducted an extensive review of the published evidence of the effects of caloric beverages on health, building on and updating a review in which two of the panel members had participated. In addition it reviewed the patterns of beverage consumption in Mexico using ENSANUT 2006 and other databases. The committee developed Mexican recommendations for healthy hydration (17). The report recommended that less than 10% of an individual’s energy intake should come from beverages and that SSBs should be avoided or consumed sparingly. One of the unexpected successes of this initiative was the development of a graphic representation of the recommendations called the ‘healthy beverage pitcher’ (Fig. 2). This representation was immediately distributed through social networks and other media in spite of strong opposition and pressure on government officials from the soda and other beverage industries. The healthy beverage pitcher is now part of the textbooks and curricula of the national primary education system.

This experience provided some preliminary lessons that were useful for subsequent initiatives. Among the most important factors that contributed to the success of this process were:

1. The international independent expert panel appointed by the MOH based on scientific merit worked pro bono and without conflict of interest. This gave legitimacy to the proposed decisions.
2. The characterization of beverage consumption was based on nationwide representative dietary data and was published in international journals (14,15).
3. The expert panel published its conclusions in the most widely read public health journal in Mexico (16) and received positive comments from Latin American experts (18).
4. The analysis was presented at international scientific meetings, giving it exposure and providing opportunities for scholars from various countries to discuss the issues.
5. The beverage recommendations received important attention from healthcare professionals and the soft drink and milk industries. The Mexican minister of health contributed an editorial in which he endorsed the recommendations by the panel and underlined the importance of water as the principal source of hydration (16).
6. The healthy beverage pitcher was promoted via posters and publications for all health sectors.

In general the support of the Mexican medical community was unprecedented, and the Inter-American Heart Foundation, the Society of Endocrinologists and Nutritionists, the Mexican Diabetes Federation, the College of Internal Medicine, the Mexican Association of Cardiologists, and the Academy for the Study of Obesity in Mexico all endorsed the healthy beverage pitcher. This endorsement from the most influential medical societies in turn encouraged strong support among physicians and health professionals.

Although special interest groups, such as associations of soda and milk producers, voiced opposition, consumer groups in Mexico welcomed this initiative and provided support through their communications networks and media productions. We expect that in the future the aforementioned efforts will stimulate consumer demand for healthier beverage products from the food industry, facilitating the regulatory and educational work of the government. In conclusion, much positive feedback has been generated, and the Mexican minister of health has expressed his commitment to maintaining these recommendations (16).

National agreement for healthy nutrition

The MOH, with support from the INSP and other scholars, developed the National Agreement for Healthy Nutrition (ANSA). The ANSA is founded on the WHO Global Strategy on Diet, Physical Activity and Health (19). The process included a review of the risk factors for obesity and NCDs and recommendations from international agencies and governments and an international meeting of experts to discuss the reviews and identify lines of action. They agreed on the need to create a comprehensive, multisectoral, multilevel policy with participation of the government and civil society, including industry, non-governmental organizations (NGOs), and academia.

Ten objectives were identified for a national policy aimed at preventing obesity and NCDs (Table 2). Some objectives require government programmes aimed at behavioral changes at the individual level. Others require that the federal and state governments work with the food industry to achieve healthy food alternatives. Most of the government sectors and agencies related to food and nutrition identified goals and deadlines.

One of the main challenges of the ANSA has been the lack of harmonization between industry interests and public health objectives. This has been a barrier to agreements with the food industry regarding specific goals and deadlines to achieve the ANSA objectives. Regulation of advertising and sugar, fat, and sodium content and other proposed actions are perceived by industries as a threat to

Table 2 National Agreement for Healthy Nutrition: Ten strategic objectives that address the obesity problem integrally

<table>
<thead>
<tr>
<th>Objective</th>
<th>Description</th>
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<tbody>
<tr>
<td>1.</td>
<td>Promote physical activity among the Mexican population in the school, work, community and recreation environments through the collaboration of the public, private and social sectors</td>
</tr>
<tr>
<td>2.</td>
<td>Increase the availability, accessibility and consumption of plain drinking water</td>
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<td>3.</td>
<td>Reduce fats and sugars in beverages</td>
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<tr>
<td>4.</td>
<td>Increase daily intake of fruits and vegetables, legumes, whole grain cereals, and fiber by increasing their availability and accessibility and promoting their consumption</td>
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<td>5.</td>
<td>Improve the public’s ability to make informed decisions about a proper diet through useful, easy-to-understand labeling, thereby promoting nutritional and health literacy</td>
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<td>6.</td>
<td>Promote and protect exclusive breast-feeding for the first six months of life and complementary adequate feeding afterward</td>
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<td>7.</td>
<td>Reduce consumption of sugars and other caloric sweeteners added to foods and increase the availability and accessibility of low- or no-calorie sweeteners</td>
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<td>8.</td>
<td>Decrease daily consumption of saturated fats and minimize consumption of trans fats from commercial sources</td>
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<td>9.</td>
<td>Educate the public about controlling the recommended portion sizes in foods prepared at home and in permitted processed foods and encourage restaurants and food outlets to offer smaller portion sizes</td>
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<tr>
<td>10.</td>
<td>Reduce daily sodium intake by reducing the amount of added sodium in foods and increasing the availability and accessibility of low- or no-sodium products</td>
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their profits. This is not necessarily true. With innovation, creativity, standardization of rules, and gradualism, the food industry could handle the challenges of more controls and at the same time accelerate the development of products with a better nutritional profile. The economic impact of high consumption of energy-dense food high in sugar, fat and sodium is of critical importance. The state cannot abdicate its responsibility to protect the health of the population through the implementation of mechanisms and controls similar to those suggested by the ANSA.

School guidelines for foods and beverages

One of the direct results of the ANSA was the development of school food and beverage guidelines by the Ministry of Education (MOE) and the MOH based on criteria suggested by scientific evidence and the consensus of a group of nutritional experts from more than 15 national and international institutions and organizations. These guidelines promote the daily intake in schools of healthy foods, such as fruits, vegetables, and water; ban sodas; limit the availability of other SSBs, whole milk, salty and sweet snacks, and desserts that comply with nutritional criteria developed by the expert group to a maximum of two days per week; and eliminate the products that do not comply with the nutritional criteria. The gradual implementation of the guidelines was initiated in January 2011 with the expectation that implementation will be completed in 2014. This gradualism was designed to allow time for the parties involved to improve the nutritional quality of school foods.

The process from the development of the proposed regulations to their approval highlights the role of the food industry in opposing regulation aimed at improving the health of the population. For example, the experts proposed limits for added sugar, salt, saturated fat, trans-fatty acids and total calories. They also proposed the elimination of all caloric beverages and the use of an energy-density criterion to limit the availability of high-energy snacks served in small portions, because children could purchase more than one portion of these products. The legal process for new regulations in Mexico includes a public hearing administered by the National Commission for the Improvement of Regulations (NCIR). The public hearing resulted in 842 comments, with almost two-thirds (63%) in support and one-third (37%) against the regulations. However, 99% of the food industry’s comments were against the regulations, while 86% of those from the social and academic sectors supported the regulations. However, despite the wide social support for the implementation of the original proposed regulations, the NCIR made a preliminary ruling rejecting the original proposal and instructing the MOH and the MOE to address the specific questions and issues raised by industry during the hearing. The ruling led to MOH and MOE negotiations with the food industry and other interest groups, which resulted in the elimination of the energy–density criterion and changes in the upper limits for sugar and saturated fat. Although soda was banned from schools, despite strong opposition from the soda industry, other SSBs, including juices and flavored waters with some amount of juice, and milk were allowed.

The public hearing and the negotiations stimulated the interest of NGOs engaged in preventing obesity and promoting children’s rights, among other convergent problems. Recent evaluations of the implementation of this initiative have identified challenges, including (i) the need to reduce the sales of salty snacks from the average of more than three times per week in most schools; (ii) banning the sales of SSBs that are currently not banned; (iii) increasing water availability and promoting its consumption; (iv) assuring funding for comprehensive evaluations of the programme and (v) guaranteeing the commitment of the new administration to maintaining and improving the programme.

Front-of-package (FOP) labeling system

The FOP labeling systems are a new trend in the promotion of healthier food choices among consumers, regardless of their levels of education. Internationally, these systems are one of the key tools. The evidence demonstrates that consumers have difficulty interpreting the labels on the backs of processed foods. Thus a number of FOPs have been created around the world. A group of transnational food industries created a system known as the Guideline Daily Amount (GDA) to be a rapid guide for consumers and as an alternative to other FOPs. A useful FOP must be simple and must be established by a group independent from the food industry. In developed nations GDAs have been criticized for their complexity (20–22). A recent evaluation conducted by the INSPI and the MOH found that the GDAs are not useful guides for better nutrition choices among consumers in Mexico (23). This study demonstrated that GDAs are misleading, and other authors in developed countries have arrived at the same conclusion. In response, the Mexican government established its own independent, pro bono, international scientific committee to develop an FOP. After reviewing alternatives, the Mexican expert group decided to develop a system similar to the one known as Choices International, but adapted to the food groups currently available in Mexico. This system awards a voluntary ‘seal of recommendation’ to the top 20% of foods in each food group with the best nutritional profiles. The criteria that define the profiles, contrary to the GDAs, are determined by an independent expert group and evaluate contents identified by the WHO as problematic for health (sugar, fat, and sodium) in addition to the total energy content. The INSPI is working to refine the system so it can be launched as soon as possible.
Regulation of marketing of foods and beverages to children and adolescents

The ANSA identified food and beverage marketing, in particular when it is addressed to adolescents and children, as a factor underlying unhealthy nutritional choices. Mexico is collaborating with the Pan American Health Organization (PAHO) task force to control food marketing to children and adolescents. The task force recently released a report on the best practices countries should adopt to protect children from unhealthy choices that might compromise their health (24).

In Mexico, the food industry proposed a self-regulatory code for marketing known as the Self-Regulatory Code of Advertising of Food and Non-Alcoholic beverages. Addressed to Children. This code is insufficient and is far for complying with the PAHO recommendations. In its current form it will hardly protect children and adolescents from exposure to marketing campaigns for junk food. For instance, there is no penalty for advertising unhealthy foods on TV, for products or fast food chains to give toys or incentives, or for animated characters to promote products to school-age children. The international consensus is that advertising is of strategic importance for health and that it has to be regulated by the state. This has already been accomplished in some countries.

Soda taxation initiatives

Mexico is the leading country in the world in the consumption of SSBs, with an estimated intake of 163 L per person per year (25). There have been attempts in Mexico to tax sodas as a strategy to reduce SSB consumption in the population and to generate revenue to use on obesity prevention interventions among the poor, such as the introduction of potable water in schools and poor communities, where clean drinking water is not always available. The INSP has estimated own and cross-price elasticities of the demand for soft drinks and other SSBs and has explored the effect of a tax on beverage expenditures according to income level (26; Colchero, unpublished data). Results of a recent analysis indicate that the demand for soft drinks is elastic: a 10.0% increase in the price of soft drinks is associated with a decrease in consumption of 10.1% (Colchero, unpublished data). Consumers substituted water and milk when the price of soft drinks rose. Higher elasticities were found among households in more deprived areas and from the lowest income quintiles. Despite these results, the tax initiative so far has not been approved by the congress due to strong lobbying from the food industry. It is important to build support and to achieve coordination between the government sectors involved in the tax initiative and civil society to pass a bill soon.

Conclusion: evidence-based policy formation model

The Mexican government has considered several actions to make it easier for the population to develop healthy eating habits, including (i) the Mexican national beverage guidelines; (ii) a multisectoral national obesity prevention strategy based on the ANSA but providing a budget, accountability mechanisms, and intersectoral coordination; (iii) the school guidelines for healthy foods; (iv) the Mexican FOP and (v) the regulation of food and beverage marketing to children. These recommendations were published in the position book developed by the Mexican National Academy of Medicine (27). In addition a national food and nutrition education strategy is necessary to educate the population about the risks of consuming SSBs and energy-dense foods, particularly ultraprocessed products, and the government must encourage the food industry to provide healthy, low-cost alternatives.

The documented processes represent, to our knowledge, some of the best practices in evidence-based health policy in Mexico, characterizing the problems and opportunities by using updated, nationally representative data; forming an international independent, pro bono expert panel; adapting international evidence to the local context; and translating recommendations into policies and programmes. Thanks to these efforts, important modifications are already taking place. These include the food and beverage regulations in the school system, including the ban on soda sales, the reduction of fat in the milk distributed by the government through social programmes for vulnerable and low-socioeconomic populations, and the provision of nutrition information to policy makers in congress who are developing initiatives and to consumers to make better nutrition choices, among many other activities.

Some recommendations for an effective obesity prevention policy in Mexico are summarized in Table 3. Mexico is facing a burgeoning epidemic of obesity, diabetes, coronary heart disease and cardiovascular disease. The evidence indicates that this epidemic is related to changes in the social environment that could be ameliorated with the leadership of the MOH in developing laws, norms and regulations supported by an effective nutrition education programme to encourage the population to adopt a healthy lifestyle. Decreasing consumption of caloric beverages and energy-dense foods is an essential part of the solution. The priority programmes of the MOH and the MOE must include initiatives to increase the consumption of water in schools and to improve the quality of the food available to students.

The development of evidence-based policies is essential, but it is not enough. Adequate intersectoral coordination and cooperation among governmental agencies is complex and requires the participation of key policy makers. For example, we have been collaborating with the Ministries of
Table 3 Recommendations for an effective policy

1. Address explicitly not only the basic causes of obesity, but also the ones related to an obesogenic environment as part of a policy specifically designed to improve nutrition and physical activity in the population across all age groups.
2. Consider the ANSA as a part of the National Development Plan, provide a budget and a plan for follow-up able to transcend administrative changes with an intersectoral commission, and create a forum with food industry oversight.
3. Achieve adequate coordination of the government sectors at the federal, state, and local levels and with civil society. The ANSA represents a good attempt to coordinate government efforts and could become a good model if a budget is assigned and instruments to monitor goals and accountability are implemented.
4. Develop a system to monitor results, the activities of the government, and compliance with the regulations by the food industry and to review periodically the ANSA commitments and their correct implementation.
5. Assure that all prevention programmes include actions during the first years of life, a window of opportunity to decrease the risk of obesity, and address all socioeconomic groups and geographic regions.
6. Assure that the prevention programme designs consider social and cultural factors that influence behavior to achieve a high utilization of health services and adoption of healthy food and physical activity habits.
7. Develop a norm to regulate food and beverage marketing to children and adolescents. This is a crucial issue in obesity prevention and should not be a self-regulatory code. Marketing strategies can influence adoption of unhealthy food patterns that might impact health throughout the life cycle.
8. Develop a healthy diet–promotion strategy through nutritional education and other actions to recover and preserve traditional culinary roots.
9. Develop a single national voluntary front-of-package labeling system that is easy for the population to understand, in particular the poor and that orients the public towards healthier food choices.

Education, Agriculture, Social Development and Economics to organize unified messages to citizens and unified approaches to negotiate with the food industry. Some of the early initiatives were not discussed extensively with nutrition leaders, and consequently, some felt excluded and did not support them. In contrast, when initiatives included consultation with nutrition and health leaders, support was almost universal. We learned that a series of small group meetings to present the recommendations of the expert panel were beneficial in obtaining valuable feedback and building the consensus and support required to institute governmental policies.

Finally, despite industries’ declarations of a commitment to health, the strong opposition from some industrial segments, such as industrialized food and beverage associations, confirms that commercial interests prevail over health concerns at both the international and the national levels. However, we anticipate that the Mexican process, together with similar experiences in other parts of Latin America, will motivate both the government and the food industry to encourage healthier behaviors and develop healthier products.

NGOs have played an important role in this process. The Mexican Alliance for Healthy Nutrition (28), a consortium representing more than 20 NGOs, has launched a very effective media campaign against sugary beverages (29) using nontraditional media, such as social networks, billboards and posters in subway lines, as well as traditional media coverage.

The food industry, without independent academic support, established the Alliance for a Healthy Life (30) to promote GDAs that emphasize energy balance instead of the government recommendations that would limit the intake of sugar, salt, fat and sodas. Several academic groups, including ours, are documenting these ongoing campaigns.

Funding agencies can play an important role in the prevention and control of obesity in low- and middle-income countries. An example is the Bloomberg Philanthropy’s (BP) model in its public health programme, which has supported initiatives in tobacco control, road safety, and maternal health through funding academic institutions, advocates, government offices, and networking activities. BP funds academic institutions to generate evidence that can be useful for designing policies and programmes and for monitoring and evaluating such initiatives. NGOs are funded to advocate for the implementation of evidence-based strategies for the prevention and control of health problems, and government offices are funded to improve implementation of such policies and programmes. BP has started a pilot programme in Mexico on obesity prevention that uses this funding model that has been successful in other areas, and it has started to show promising results.

In 2010, when the ANSA was approved, there were no explicit obesity prevention policies in Mexico. Thus the Mexican experience is very brief. In this short time, however, we have been able to identify accomplishments, failures and challenges.

The intersectoral agreement (ANSA) was signed by all relevant actors with the president of Mexico as the witness; however, its implementation has limitations because of structural weaknesses. The school food regulations were approved despite the strong opposition of the food industry and have been implemented during 3 years, although there are still some implementation challenges. The self-regulatory code for marketing to children has design flaws,
because it does not comply with international standards, such as the ones proposed by the WHO and the PAHO (24). The FOP labeling and the soda tax initiatives failed to be enacted due to opposition from the food industry.

The initiatives have faced two principal barriers. (i) The food and beverage industries have put up strong opposition. Given its economic power and the lack of harmonization between its economic interests and the public health objectives, this sector has opposed most government efforts and has successfully prevented FOP labeling, the regulation of marketing to children according to international standards, and the soda tax bill. (ii) Government limitations, including poor planning capacity, lack of accountability and transparency, inadequate budgeting, and insufficient resources, have been an obstacle for the implementation of the ANSA and have put constraints on the implementation of the school regulations. In some cases unwillingness to protect the public interest from influences that oppose health policies has been a factor in the failure to enact some policies.

The factors that facilitated the approval and partial implementation of the ANSA and the enactment of the school food regulations include (i) support from key political leaders during the past administrations at the MOH and the MOE; (ii) strong support and substantial backing for these policies by effective civil society organizations; (iii) academia’s solid support and dedication to developing the technical framework; (iv) media coverage of the obesity epidemic and its risk factors and (v) the use of recommendations for obesity prevention policies from international organizations, such as the WHO Global Strategy on Diet, Physical Activity, and Health and the World Cancer Research Fund 2007 report.

The government sectors involved in obesity prevention require the support of civil society and academia to develop and implement the FOP labeling system, regulate food and beverage marketing, promote water consumption, enact taxes on SSBs, improve the implementation of the school guidelines for healthy nutrition, and devise an effective nutrition education strategy. These are urgent actions that could contribute to reducing the obesogenic environment and help the population choose healthier lifestyles.

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Conflicts of interest

The authors have no potential conflicts of interest to declare.

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