

# Targets and Timelines for Reducing Salt in Processed Food in the Americas

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Reducing dietary salt is one of the most effective interventions to lessen the burden of premature death and disability. In high-income countries and those in nutrition transition, processed foods are a significant if not the main source of dietary salt. Reformulating these products to reduce their salt content is recommended as a best buy to prevent chronic diseases across populations. In the Americas, there are targets and timelines for reduced salt content of processed foods in 8 countries—Argentina, Brazil, Canada, Chile, Ecuador, Mexico, and the National Salt Reduction Initiative in the United States and Paraguay. While there are common elements across the countries, there are notable differences in their approaches: 4 countries have exclusively voluntary targets, 2 countries have combined voluntary and regulated components, and 1 country has only regulations. The countries have set different types of targets and in some cases combined them: averages, sales-weighted averages,

upper limits, and percentage reductions. The foods to which the targets apply vary from single categories to comprehensive categories accounting for all processed products. The most accessible and transparent targets are upper limits per food category. Most likely to have a substantive and sustained impact on salt intake across whole populations is the combination of sales-weighted averages and upper limits. To assist all countries with policies to improve the overall nutritional value of processed foods, the authors call for food companies to supply food composition data and product sales volume data to transparent and open-access platforms and for global companies to supply the products that meet the strictest targets to all markets. Countries participating in common markets at the subregional level can consider harmonizing targets, nutrition labels, and warning labels. *J Clin Hypertens (Greenwich)*. 2014:1–5. © 2014 Wiley Periodicals, Inc.

High dietary salt\* is estimated to cause more than 3 million deaths around the world annually with the majority of deaths related to the adverse cardiovascular outcomes of hypertension.<sup>1</sup> This places high dietary salt as the 11th leading risk worldwide for premature death in terms of disability-adjusted life-years, ranging from 9th to 15th in the Caribbean, North, Central, and South America.<sup>2</sup> The United Nations and the World Health Organization (WHO) strongly recommend that countries implement programs to reduce dietary salt; the WHO identifies salt reduction as a best buy to prevent chronic disease and improve health.<sup>3,4</sup>

To guide national governments in their efforts to reduce the overconsumption of salt at the population

level, a variety of governmental and nongovernmental health organizations have provided recommendations.<sup>5–13,13–17</sup> With processed and pre-prepared foods—the main source of dietary salt in high-income economies and their consumption increasing where people are undergoing nutrition transition<sup>18</sup>—lowering salt content is most effectively achieved through policies that incentivize the food-processing sectors to reformulate.<sup>7</sup>

Since 2009, the Pan American Health Organization (PAHO) has supported a Technical Advisory Group (TAG) to mobilize policies and interventions to limit dietary salt intake. A number of countries in the Americas have made progress in this regard and more are coming on board. The new WHO global target of a 30% relative reduction in salt intake by 2025 is adding incentive.<sup>19</sup>

Yet, with regards to setting targets and timelines for food industries to reduce the salt in processed foods, health authorities in many countries remain impeded by the requirements of the process—the need for data on food composition and national dietary patterns, independent and objective food technology expertise, and resource commitments for the longer term to set the targets and then monitor and evaluate results.<sup>6,7,20</sup>

To help countries initiate target-setting, in 2013 PAHO with TAG supported the development of a *Guide to Setting Targets and Timelines to Reduce the*

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\*While sodium is the technically and scientifically correct term for the nutrient of public health concern, both of the terms salt and sodium are used in this document depending on context. Whether a country refers to salt or sodium in its discourse on the nutrient is a matter of national discretion.

Equivalencies: 5 g salt (NaCl) = 2000 mg sodium (Na) = 87 mmol sodium = 87 mEq sodium.

*Salt Content of Food* based on the experiences of the most advanced countries in the region.<sup>21</sup> That same year, responding to requests by countries to know the targets and timelines in place elsewhere, the food sectors participating, and the food technology issues that have already been addressed, PAHO compiled the targets and timelines set in the region and then convened active and ready countries in Mexico City to fully exchange their experiences and concerns.

## METHODS

Information about the national programs in this manuscript is based on communications materials from the Mexico City meeting,<sup>22</sup> from a detailed technical document on dietary salt-control policies and interventions—*Salt-Smart Americas: A Guide to Country-Level Action*,<sup>23</sup> and from PAHO's regular communication with and surveying of national governments.

The manuscript describes the targets and timelines set in 8 countries in the Americas region—Argentina, Brazil, Canada, Chile, Ecuador, Mexico, the United States National Salt Reduction Initiative (NSRI) and Paraguay—in terms of the approaches applied; the types of targets developed, including their advantages and disadvantages; and the positive and challenging experiences of these countries with target-setting and monitoring of progress. It concludes with a number of recommendations for target-setting and for actions that can assist countries in monitoring and improving the nutritional profile of processed foods, including the role of international public health agencies.

The detailed food categories, target values, and timelines set in Argentina, Brazil, Canada, Chile, and the NSRI are posted on the PAHO Web site at [http://www.paho.org/hq/index.php?option=com\\_content&view=article&id=2015&Itemid=4024&lang=en](http://www.paho.org/hq/index.php?option=com_content&view=article&id=2015&Itemid=4024&lang=en). One table compiles the target values for food categories in common in the 5 countries; a second table gives the complete food categories and targets for Canada and the NSRI less those in the first table.

### A Mix of Voluntary and Regulatory Approaches

Countries in the region have either voluntary or regulated targets or a combination of the two. Brazil, Canada, Mexico, and the NSRI have exclusively voluntary targets.<sup>24–26</sup> Argentina and Paraguay have regulated limits on the salt content of foods.<sup>27,28</sup> Chile and Ecuador have both voluntary and regulated components to their approaches: both have voluntary agreements with artisanal bread makers and Ecuador also with sausage producers, and both require warning labels on packaged products that exceed upper limits for critical nutrients including sodium.<sup>29–31</sup>

### Different Target Types

Countries are developing different types of targets: the *average* for sodium content for products in a category, a *sales-weighted average or mean* (SWA or SWM) where an average value for a category is weighted by the sales

volumes for products in the category, and a *maximum or upper limit* considered acceptable for all products in a category.

### Different Food Categories

The food categories undergoing reformulation vary across the countries, more so in terms of the products within a category as they reflect national food cultures than the broad categories themselves. The scope of food categories selected for reformulation also varies. In Canada and for NSRI, most dietary salt comes from processed food, and following the UK model, all categories of processed foods are in schedules for reformulation. NSRI also has targets and timelines for restaurant foods.<sup>32</sup>

Argentina and Brazil are taking a step-wise approach beginning with priority categories. In Argentina, for example, bread alone was found to account for almost 25% of total salt in the diet, and consultations with food technology experts and taste testing with consumers showed that reducing salt in bread was feasible and acceptable.<sup>33</sup> In 2013, 4 food categories with almost 500 products were mandated for reformulation.

In Brazil, both processed foods and discretionary salt added in home cooking and at the table accounts for high dietary salt in many regions. Brazil has targets for 22 food categories and most recently is preparing to address meat and dairy products.<sup>22,24</sup>

Chile, like Argentina, selected artisanal bread as the initial food category for reformulation. Packaged foods are subject to the warning label regulation that covers sodium and other nutrients. Mexico and Paraguay have also begun their food reformulation initiatives with a bread category: In Mexico, sliced bread and a product similar to baguette is affected, and Paraguay's law applies to the salt content of wheat flour for bread and bakery products.<sup>28</sup>

Table I summarizes the approaches taken by the 8 countries with targets.

## DISCUSSION

### Considerations for Selecting Targets

The most accessible and transparent approach to target development and monitoring is setting upper limits per food category. The authors suggest that upper limits be based on the 70th percentile of products in a food category and gradually reset to a new lower 70th percentile until the level of sodium in the diet reaches the national goal. This can be paired with a requirement for warning labels on foods with sodium content exceeding a maximum.

The approach most likely to have substantive and sustained impact on salt intake across whole populations is the combination of averages or SWA and maximum limits per food category. Using SWA in particular directs the reduction efforts to the products with the highest sales while the maxima ensure that there are no products with excessively high salt levels in

**TABLE I.** Country-Specific Approaches

Country	Food Categories and Target Types		
	Single Category (Bread)	Several Categories	Comprehensive Categories
Argentina		Regulated upper limits	
Brazil		Voluntary upper limits	
Canada			Voluntary sales-weighted averages and upper limits
Chile	Voluntary average for artisanal and private label-brand breads		Regulated warning labels
Ecuador	Voluntary percentage reduction for artisanal bread and sausage		Regulated warning labels
Mexico	Voluntary percentage reduction		
National Salt Reduction Initiative			Voluntary sales-weighted means
Paraguay	Regulated average salt content and upper limit		

the category. This way the range of products within a category is affected and the benefits of reduced salt products are distributed equitably across all people consuming them.

The advantages and disadvantages of the different targets are described in Table II.

**Improving the Overall Nutritional Quality of Processed Foods**

For low- and middle-income countries and indeed for all countries with policies to improve the overall nutritional value of processed foods, transparent and open-access food composition data supplied by the food industry would significantly reduce the efforts of countries to determine baseline content of all nutrients and monitor changes. The WHO Platform 2 on monitoring and evaluating salt consumption made this recommendation.<sup>15</sup> Furthermore, we suggest that product sales data be more accessible to aid development of SWA targets; these data are currently proprietary and available only at high cost.

With global food producers, there is an important role for international public health entities. There is already an international database of salt content of several global brand food products. It shows the range of salt levels in similar food products or “identical” global brands across a number of countries—evidence of the salt reductions that are currently technically feasible.<sup>34</sup> What the research also demonstrates is that countries, especially low- and middle-income countries, would benefit if multinational companies reformulating to meet the strictest targets would supply those products across global markets.

International public health agencies can also work with global producers to develop international food categories with consistent targets and timelines, in effect to begin harmonization.<sup>7</sup> Common market platforms are a potential locus for international agreements on various initiatives that contribute to improved nutrition, eg, warning labels, nutrition labels, advertising, and

marketing to children. Already, the Food and Nutrition Security working group of MERCOSUR (in the southern cone of South America) has agreed to include population-level sodium intake reduction and combined sodium and iodine intake monitoring in its work plan.

**Maintaining Momentum**

Because the objective with dietary salt reduction is social change on a scale similar to the de-normalization of tobacco use, health authorities are finding that the broader the base of public awareness and support, the better. Strong public consensus for salt reduction, in some cases promoted and supported by media, is anchoring government commitments for the longer term needed to reach meaningful results.

Critical to maintaining public consensus is holding industry accountable for commitments to reformulate, especially with voluntary targets, through transparent and public reporting of progress. Argentina, for example, reports both process and outcome monitoring at 3 levels: population, food industry, and specifically with bakers. Taking lessons from tobacco control, conducting public opinion surveys, while a part of monitoring and evaluation, is contributing to maintaining the profile of and pressure on government and industry for salt reduction. In Brazil, all agreements with sectors of the food industry are publicized and the food industry and government have agreed to label analysis and laboratory testing to determine sodium additives in products.<sup>22</sup>

**Challenges**

Critical challenges remain, particularly in Central and South American countries. One is street food vendors and small food establishments not part of national restaurant associations that, combined, serve large proportions of the population. Another is wholesale food suppliers. A number of countries are reflecting on whether regulations would be more effective than voluntary approaches if the full spectrum of processed

**TABLE II.** Advantages and Disadvantages of Target Types

Advantages	Disadvantages
<p>Sales-weighted averages/means</p> <ul style="list-style-type: none"> <li>The gold standard, accounting for product market share, or, in other words, people's buying patterns, facilitates companies to prioritize for reformulation of those products within a category that contributes more to salt intake. Reformulations reduce the salt within the whole food category and by extension offer the benefits of lower salt intake equitably across all people who consume the products in the category.</li> <li>Monitoring sales-weighted averages of different food categories combined with food intake survey data allows the most accurate estimates of population intake of salt.</li> </ul> <p>Maximum or upper limits</p> <ul style="list-style-type: none"> <li>Set a clear ceiling for all products in a category.</li> <li>Can be set at around the average for a food category at a point in time and reduced as the average moves downward. Requires a formal publically announced plan to gradually lower the upper limits.</li> <li>Directly applicable to regulatory approaches such as warning labels.</li> <li>Relatively easy to utilize in monitoring whether food products achieve the target.</li> <li>Easiest for industry, policy makers, and consumers to understand.</li> <li>Easy for consumers and food companies to compare.</li> <li>Reduces the salt content of products above the maximum or highest salt products are eliminated altogether.</li> </ul> <p>Simple averages</p> <ul style="list-style-type: none"> <li>Easier and less expensive to implement and monitor than sales-weighted averages; accessible in low-resource settings.</li> </ul>	<ul style="list-style-type: none"> <li>The sales volume data required for weighting of averages are proprietary and expensive to obtain so most likely out of reach in low-income settings.</li> <li>Sales-weighted averages can be brought down with a focus on a few high market volume products without addressing products associated with vulnerable groups, eg, children.</li> <li>Difficult to use in developing regulations, eg, for warning labels; are impractical for consumer education as they are not easily understood by consumers and consumers groups; and for an independent organization willing to monitor progress of salt reduction, most likely impossible without significant resource inputs.</li> </ul> <ul style="list-style-type: none"> <li>Likely to result in reformulation efforts aimed predominantly at food items above the target rather than all foods in a category, with food companies aiming reformulation to be at or just below the maximum and no lower.</li> <li>Companies whose products have salt levels initially below the maxima have no incentive to reduce salt content.</li> <li>Undermines adoption of best in class/best in world that are based on sales-weighted averages.</li> <li>If high-salt content products are not high volume regarding consumption, may have little or no impact on actual salt intake levels.</li> <li>Companies whose products are below the maximum do not participate.</li> </ul> <ul style="list-style-type: none"> <li>No incentive for industry to focus on high-volume high-salt products. Industry may reduce the salt in low-selling products in a category, thereby reducing the simple average of the category but having no significant impact on actual salt intake.</li> </ul>

and prepared foods and the populations who consume them are to be covered.<sup>22</sup>

Countries are also recognizing the need to balance longstanding programs to prevent iodine deficiency that rely on iodized table salt with initiatives to reduce salt intake. The WHO and PAHO have prepared technical documents that can be consulted for guidance in this regard.<sup>5,8,35-38</sup>

**CONCLUSIONS**

Reducing the overconsumption of salt across populations is recognized as a best buy to avoid deaths and disability caused by chronic noncommunicable diseases. Within the package of interventions advocated to achieve lower dietary salt intake, setting targets and timelines to reduce the salt content of processed foods is an important component. For countries that have not yet undertaken negotiations with the food industries to lower the use of salt, the food categories and the ranges of targets already set contribute to the evidence of what is feasible. Going forward, the more uniform the food categories, the more similar the approaches to target development and taking example from existing targets could facilitate negotiations with the food industry and make cross-country comparisons easier and

contribute to a consistent messaging in support of global efforts to reduce salt levels in processed foods.

All 8 countries featured here have been able to set targets despite having very different levels of resources available for their initiatives. Our recommendations can benefit all countries regardless of income status. Countries that fail to introduce meaningful targets and timelines for reduced salt content in foods and furthermore fail to monitor progress place their populations at unnecessary risk of illness and needlessly burden their health systems.

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