

# Building capacity in reducing population dietary sodium intake in the Americas

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## ABSTRACT

**Objective.** To present some resources developed as part of the technical support of the Pan American Health Organization (PAHO) to Member States to reduce population dietary sodium intake, and to discuss the main challenges and opportunities to accelerate action toward sodium intake reduction in the Americas.

**Methods.** Sources of information include a mapping of salt reduction policies conducted in 2019, reports from working group meetings, interviews conducted in 2020 and 2021 in seven countries, and technical documents developed around the Updated PAHO Regional Sodium Reduction Targets.

**Results.** These tools show that, despite progress, challenges to succeed in this agenda persist. Priority given to sodium reduction is low in most countries, with insufficient resource allocation. There is a lack of intersectoral coordinated action, and a systemic approach to food systems is commonly missing. Surveillance mechanisms of sodium intake are insufficient, and industry interference in policy processes is commonly identified, undermining policy progress and success. There are also important regional opportunities to address these challenges. These include common ground for future collaborations by updating, strengthening, and complementing these existing tools, and technical and financial support for data generation.

**Conclusions.** PAHO is committed to continue to support countries in the process of promoting, implementing, and monitoring cost-effective sodium reduction interventions. One key policy priority in this agenda is the adoption of the Updated PAHO Regional Sodium Reduction Targets with a mandatory approach, together with the comprehensive and complementary implementation of other strategies. Strong political will and commitment of countries will be critical to translate goals into concrete achievements in the Americas.

## Keywords

Sodium chloride, dietary; noncommunicable diseases; nutrition policy; dietary approaches to stop hypertension; Americas.

Noncommunicable diseases (NCDs) are responsible for 74% of all deaths, with cardiovascular diseases being the leading cause of death in almost all countries (1). At the global level, there is clear evidence that excessive consumption of salt/sodium adversely affects blood pressure, which alone accounts for an estimated 10.8 million deaths in 2019 (2). A recently published analysis showed that excess sodium intake accounts for the highest proportion of premature cardiometabolic disease deaths (89% of all sodium-attributable deaths) in Latin America and the Caribbean (3).

The World Health Organization (WHO) recommends a population-based daily intake of less than 5 g of salt (<2 g of sodium) per adult to reduce blood pressure and the risk of cardiovascular disease, stroke, and coronary heart disease (2). Salt/sodium consumption in the Region of the Americas is well above the recommended levels (4).

WHO “Best Buys” for the prevention and control of NCDs are part of the interventions recommended in the WHO SHAKE package for salt reduction (5). This package includes the following cost-effective strategies to be implemented,

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ideally, together: Surveillance (Measure and monitor salt use); Harness industry (Promote the reformulation of foods and meals to contain less salt); Adopt standards for labeling and marketing; Knowledge (Educate and communicate to empower individuals to eat less salt); Environment (Support settings to promote healthy eating) (5).

In 2009, the Pan American Health Organization (PAHO) launched the initiative Cardiovascular Disease Prevention through Population-wide Dietary Salt Reduction to support Member States in efforts to reduce population salt/sodium dietary intake, and with the broader goal of meeting the WHO 2025 global target for NCDs of a 30% relative reduction in mean population intake of salt/sodium. This initiative was accompanied by a Technical Advisory Group (TAG) to translate evidence into policy and action, and that included researchers, public authorities, and civil society representatives from within the Region of the Americas and beyond. The work of the PAHO TAG included three phases. The first phase (2009–2011) focused on policy development. During the second phase (2012–2015), the TAG focused its efforts on policy awareness and policy support with the elaboration of guidelines, technical reports, and protocols to assist Member States in taking action. This phase also included the development of the first set of PAHO Regional Sodium Reduction Targets, launched in 2015 (6). The third phase of the TAG (2016–2018) focused on policy implementation and monitoring. This included the review of current policies and initiatives, resources, and advocacy efforts for salt reduction in the Region, as well as the expansion and updating of the 2015 PAHO Regional Sodium Reduction Targets (7, 8). PAHO also supports the Regional Network of Action on Sodium Reduction in the scope of the United Nations Decade of Nutrition.

This article describes the resources that have been developed as part of PAHO's technical support to Member States to reduce population sodium intake, highlighting the recent Updated PAHO Regional Sodium Reduction Targets and ongoing efforts to support countries in the Region to adopt and implement these targets, and presents the main challenges and opportunities encountered in the Region to accelerate action toward sodium intake reduction.

## MAPPING OF SALT/SODIUM REDUCTION INITIATIVES IN THE REGION OF THE AMERICAS

The objectives of this PAHO mapping were: to make available a repository of existing country policies addressing population dietary sodium reduction in the Region of the Americas; to identify policy gaps in the Region following what is outlined in the WHO Best Buys most cost-effective recommendations for the prevention and control of diet-related NCDs; and to discuss priorities for future work in the Region (7).

The mapping analyzed data from 34 countries. Key sources for this review included responses from the PAHO online Survey on National Initiatives for Salt/Sodium Reduction in the Americas (2016), the database from the PAHO Country Capacity Survey for NCDs and Risk Factors (2017 and 2019), the repositories of legislation for the PAHO REGULA initiative as of 2018, and an electronic search (as of 2019). Country profiles were prepared and sent to each country's public health agency for validation and comments. Additionally, the report includes TAG recommendations from a meeting guiding Phase 3 of the regional salt reduction initiative (7).

The mapping shows that, out of 34 countries, 11 countries have implemented voluntary policies to reduce sodium content in food products versus 2 that have enacted mandatory sodium content targets; 13 countries have established healthier food environments in public institutions, and at least 26 countries had consumer awareness programs in place; no country had implemented behavior change communication and mass-media campaigns at the national level; and 5 countries had implemented front-of-package labeling policies for products high in salt/sodium and marketing restrictions for such products when targeted at children. No country has implemented taxation on products high in salt (7).

As a result, it is recommended that the Region advance legislation and regulations such as mandatory limits for sodium content in food products, front-of-package nutrition labeling, marketing restrictions, fiscal policies, and supportive environments—all these with effective enforcement and monitoring mechanisms in place.

## PAHO'S TECHNICAL SUPPORT TO MEMBER STATES

Several countries in the Region of the Americas have monitored sodium content levels in packaged foods. For instance, in 2016, the multi-country project, "Scaling-up and evaluating salt/sodium reduction policies and programs in Latin American countries" started activities with the participation of research groups from Argentina, Brazil, Costa Rica, Paraguay, and Peru, and support from the International Development Research Centre (IDRC) and PAHO. Activities included monitoring sodium content in different food categories using the University of Toronto's Food Label Information Program (FLIP) app and webpage.

PAHO is currently supporting research to continue sodium content analysis of food products in Argentina, Costa Rica, Panama, and Peru. PAHO plans to expand this work to other countries in the Region, in order to support the political and technical processes necessary toward the implementation of the Updated Regional Sodium Reduction Targets (8).

Country capacity is also being built in other complementary areas, such as social marketing, knowledge transfer, and analysis of the economic and health impact of salt reduction policies using simulation modeling methods.

## DEVELOPMENT OF THE UPDATED PAHO REGIONAL SODIUM REDUCTION TARGETS

This recently launched tool was developed in collaboration with the WHO Collaborating Centre on Nutrition Policy for Chronic Disease Prevention at the Department of Nutritional Sciences of the University of Toronto (Canada), the Ontario Tech University (Canada), TAG members, and Member States' representatives, with support from Resolve to Save Lives.

The first PAHO Regional Targets (6), developed in 2015, were agreed to be updated in a phase-wise approach. Food supply monitoring data showed that a large proportion of food products across a wide range of food categories was already meeting these targets (9). Furthermore, the mapping of salt/sodium reduction strategies showed that an increasing number of countries had already established sodium reduction targets (mostly voluntary) for certain food categories, which was favorable to update the targets and expand to more specific categories and subcategories. Other research on sodium levels in packaged

foods in the Region; broader policy initiatives, such as the introduction of regulations requiring the application of front-of-package labels that allow consumers to easily and quickly identify products excessive in sodium/salt; the development of technical tools, such as the PAHO Nutrient Profile Model; added to the extensive body of evidence available in the Region for the establishment of the Updated Regional Sodium Reduction Targets (8).

The Updated PAHO Regional Sodium Reduction Targets considered an expansion from 18 food categories in 2015 to 16 food categories and 75 subcategories in 2021 and the establishment of a phase-wise approach for its implementation (2022–2025). Approximately, 15% and 30% reductions were calculated for 2022 and 2025, respectively, for each food category/subcategory. The targets are expressed in mg/100 g and mg/kcal (8). This approach aligns with the PAHO Nutrient Profile Model, which has a threshold of less than 1.0 mg of sodium/kcal (8). The updated targets are based on actual data on sodium contents of food products available in 18 countries across the Region collected between 2013 and 2018 (9), which shows that they are feasible to achieve. They were also compared with the values from other national targets in the Region and from the United Kingdom, and they are in line with the WHO Global Sodium Benchmarks for Different Food Categories, 2021 (10).

## TOWARD THE IMPLEMENTATION OF POLICIES TO REDUCE SODIUM INTAKE IN THE AMERICAS

All the technical tools described above are now being used at country level as an input to develop five-year road maps toward the implementation and strengthening of effective sodium reduction strategies included in the WHO SHAKE Package (5) to contribute to the global goal of achieving a 30% relative reduction in sodium consumption by 2025.

This country-targeted work prioritizes support for the implementation of mandatory targets for the reduction of sodium content in processed and ultra-processed foods in Bolivia, Costa Rica, Ecuador, Panama, Peru, and Uruguay, and support for the adoption of stricter mandatory targets in Argentina in light of the national legislation in force in the country since 2013. Mandatory approaches provide the legal tools and financial and human resources necessary to guarantee effective implementation and appropriate monitoring mechanisms. Mandatory targets could consistently achieve larger salt reductions than voluntary agreements and might also achieve higher reductions in disability- and quality-adjusted life years (11).

To have a broader understanding of the local contexts, situation analyses were conducted in Argentina, Bolivia, Costa Rica, Ecuador, Panama, Peru, and Uruguay with semi-structured in-depth interviews conducted from August 2020 to January 2021 with key actors from ministries of health, academia, and civil society. This helped identify challenges and opportunities for implementing and/or strengthening the salt reduction agenda in these countries. These analyses were also useful to have a more comprehensive view of actors' perceptions of the level of implementation of these policies in their countries and the technical capacity, resources, and support needed to achieve further progress. They are also expected to serve as a starting point for future work in the participating countries and as a model to be replicated in other countries of the Region.

Both the regional mapping of policies conducted in 34 countries and the situation analyses, which at the publication of this article had been completed in 7 countries, show that despite the important progress that has been achieved in the Region with respect to the number of effective interventions implemented to reduce salt/sodium intake, the latest being Argentina and Colombia in 2022 with the approval and implementation of front-of-package warning labels on products high in salt/sodium, no country has fully implemented the WHO Best Buys, and few are on track for monitoring the impact of policies or interventions already in place. Country-specific analyses have been a great complementary tool to better understand the heterogeneous contexts and identify different perceptions on levels of implementation and engagement of diverse actors.

As one of PAHO's priorities is to support countries in the mandatory implementation of the Updated PAHO Regional Sodium Reduction Targets, interviews were useful to identify the need for country-specific discussions to better contribute to the definition of a clear road map toward such implementation. During 2021, findings from the analyses in the seven countries were shared with local actors, and efforts were concentrated in the organization of online workshops and meetings to move forward in the elaboration of five-year road maps to guide progress toward achieving the salt/sodium reduction goal.

Among some of the challenges identified in this process, and common to most countries, it is important to mention that priority given to sodium reduction is low, and this has been significantly worsened by the COVID-19 pandemic making resource allocation (both human and financial) also insufficient. In fact, policies and plans, when implemented, are often underfunded. There is a lack of intersectoral coordinated action, and a systemic and more comprehensive approach to food systems is commonly missing, with different diet-related topics usually seen in isolation. Surveillance mechanisms on sodium intake are insufficient or lacking in most countries. Despite progress, industry interference in policy processes and resistance to most of these strategies is commonly identified, undermining policy progress and success.

However, and despite the heterogeneous contexts, we can acknowledge the existence of important regional opportunities to address these challenges. First, common ground for future collaboration and next steps in this work have been identified. This includes strengthening technical assistance, exchange, and capacity building on specific aspects of the sodium reduction agenda (road map elaboration, sodium content monitoring, sodium intake surveillance, health impact analyses, front-of-package labeling studies, development of safeguards against conflict of interest throughout the policy cycle, among others). This will be done regionally but also with country-specific activities. Financial support will be provided to countries to continue data generation to support policy adoption and implementation. Technical cooperation with countries will continue by updating, strengthening, and complementing the existing tools mentioned in this article. Informed leadership of governments will be supported in order to strengthen adequate management and prevention of conflict of interest.

During 2021 and 2022, work has also been focused on providing technical support for the elaboration of five-year road maps for the implementation of the five sodium reduction strategies included in the WHO Shake Package (5). Although still in progress, some countries have been able to complete the road maps

and share them with key actors from other government agencies, academia, and civil society organizations. Something observed in the countries that have made actual progress in elaborating these plans is an active engagement of PAHO country offices, and actors from civil society and academia who are actively involved in research and advocacy activities on diet-related NCD prevention.

It is important for PAHO to continue strengthening the exchange of experiences and South–South cooperation between different national actors and between countries in the Region. Also important in this work is the coordination of strategic actions between actors that may be more involved in other diet-related NCD prevention agendas, such as obesity prevention. All this implies ongoing in-person and online meetings to share experiences and lessons learned, and to build capacity on relevant topics including, but not limited to, sodium intake surveillance, sodium content monitoring, nutrient profiling and food classification, front-of-package labeling, social marketing strategies, among others.

## CONCLUSION

Although progress in the implementation of sodium reduction strategies has been significant during the last decade, further political commitment and accelerated action is still needed to achieve more meaningful sodium intake reduction in the Region and thus reduction of NCDs. PAHO is committed to continue support to countries in the process of promoting, implementing, and monitoring cost-effective interventions by means of different instances of technical assistance and collaboration. One key policy priority in this agenda is the adoption of the Updated PAHO Regional Sodium Reduction Targets with a mandatory approach, together with the comprehensive and complementary implementation of other strategies included in

the WHO Shake Package, which include legislation and regulations that contribute to the acceleration of progress toward reduction of mean population sodium intake. Strong political will and commitment of countries will be critical to translate goals into concrete achievements.

**Author contributions.** LAA, NF, and LN conceived the original idea; NF and LAA collected and analyzed the data; LAA, NF, LN, and FGDS interpreted the results; LAA and NF wrote the first draft of the paper; LAA wrote the revised version of the paper. All authors reviewed and approved the final version.

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## Creación de capacidad para reducir la ingesta de sodio en los alimentos a nivel de la población en la Región de las Américas

### RESUMEN

**Objetivo.** Presentar algunos recursos elaborados como parte del apoyo técnico brindado por la Organización Panamericana de la Salud (OPS) a los Estados Miembros para reducir la ingesta de sodio en los alimentos a nivel de la población y abordar los principales desafíos y oportunidades para acelerar las medidas de reducción de la ingesta de sodio en la Región de las Américas.

**Métodos.** Entre las fuentes de información se encontraron un mapeo de las políticas de reducción de la sal realizado en el 2019, varios informes de reuniones de grupos de trabajo, entrevistas realizadas en siete países entre el 2020 y el 2021, y documentos técnicos acerca de las metas regionales actualizadas de la OPS para la reducción del sodio.

**Resultados.** Estas herramientas muestran que, a pesar de los avances, persisten los desafíos en el logro de esta agenda. La prioridad dada a la reducción del sodio en la mayoría de los países es baja y la asignación de recursos es insuficiente. No hay coordinación intersectorial y por lo general no se adopta un enfoque sistémico para los sistemas alimentarios. Los mecanismos de vigilancia de la ingesta de sodio son insuficientes y es común que haya interferencia de la industria en los procesos que siguen las políticas, lo que socava su progreso y éxito. Hay importantes oportunidades regionales para abordar estos desafíos, como un terreno común para futuras colaboraciones mediante la actualización, el fortalecimiento y la complementación de las herramientas existentes, y el apoyo técnico y financiero para la generación de datos.

**Conclusiones.** La OPS mantiene su compromiso de seguir apoyando a los países en el proceso de promoción, ejecución y seguimiento de intervenciones costo-eficaces para la reducción del sodio. Una prioridad política clave en esta agenda es la adopción con carácter obligatorio de las metas regionales actualizadas de la OPS para la reducción del sodio, junto a la ejecución integral y complementaria de otras estrategias. Una fuerte voluntad política y el compromiso de los países serán fundamentales para traducir estos objetivos en logros concretos en la Región de las Américas.

### Palabras clave

Cloruro de sodio dietético; enfermedades no transmisibles; política nutricional; enfoques dietéticos para detener la hipertensión; Américas.

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## Desenvolvimento de capacidade para a redução da ingestão alimentar de sódio pela população das Américas

### RESUMO

**Objetivo.** Apresentar alguns recursos desenvolvidos como parte do apoio técnico da Organização Pan-Americana da Saúde (OPAS) aos Estados Membros para reduzir a ingestão alimentar de sódio pela população e discutir os principais desafios e oportunidades para acelerar as ações em prol da redução da ingestão de sódio nas Américas.

**Métodos.** As fontes de informação incluem um mapeamento das políticas de redução de sal realizado em 2019, relatórios de reuniões do grupo de trabalho, entrevistas realizadas em 2020 e 2021 em sete países e documentos técnicos relativos às *Metas regionais atualizadas da OPAS para a redução do sódio*.

**Resultados.** Essas ferramentas mostram que, apesar dos progressos, os desafios para o êxito dessa agenda persistem. Na maioria dos países, a prioridade dada à redução do sódio é baixa, com alocação insuficiente de recursos. Não há ação coordenada intersetorial e, em geral, nem abordagem sistêmica dos sistemas alimentares. Os mecanismos de vigilância da ingestão de sódio são insuficientes e é comum haver interferência da indústria nos processos políticos, o que prejudica o avanço e o êxito das políticas. Há também importantes oportunidades regionais para enfrentar esses desafios, como um consenso para futuras colaborações por meio da atualização, do fortalecimento e da complementação das ferramentas existentes, além de apoio técnico e financeiro para a geração de dados.

**Conclusões.** A OPAS está empenhada em continuar apoiando os países no processo de promoção, implementação e monitoramento de intervenções de redução do sódio com boa relação custo-benefício. Uma prioridade política decisiva nessa agenda é a adoção das *Metas regionais atualizadas da OPAS para a redução do sódio*, com aplicação obrigatória, associada à implementação ampla e complementar de outras estratégias. A firmeza de vontade e o compromisso político dos países será crucial para materializar os objetivos nas Américas.

### Palavras-chave

Cloreto de sódio na dieta; doenças não transmissíveis; política nutricional; abordagens dietéticas para conter a hipertensão; América.

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