



## Review

## Setting targets for salt levels in foods: A five-step approach for low- and middle-income countries



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## ABSTRACT

Eighty percent of non-communicable diseases (NCDs) occur in low- and middle-income countries (LMICs). In the Global Action Plan to prevent and control NCDs, the World Health Organization has set a target to reduce mean population salt intakes by 30% by 2025. To achieve this target, salt levels in prepared and processed foods must be reduced. In this paper we propose a step-wise approach for setting targets for salt levels in foods for LMICs, as the basis for voluntary or mandatory policy interventions. The five steps are: (1) identifying the foods which contribute to salt in the diet; (2) agreeing which foods to set targets for; (3) establishing the target levels; (4) stakeholder engagement; (5) establishing monitoring mechanisms. A case study of the process of establishing regional targets in the Pacific Islands is also provided. LMICs with limited resources should establish maximum upper limits for salt for the product categories, which together contribute the majority of salt in the diet. Targets should be standardized (e.g., salt per 100 g of product) and have clear timelines. As well as being the basis for voluntary or mandatory levels for salt levels in foods, targets can also be used to inform labeling and taxation policy. In order to have the most significant effect on population salt intake in LMICs, these policy interventions will need to be combined with consumer-facing strategies aimed at changing behaviours and investment in research and development to support effective implementation.

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## Introduction

Heart disease and stroke cause one in four deaths worldwide (Lozano et al., 2012) and 80% of cardiovascular disease deaths occur in low- and middle-income countries (LMICs) (World Health Organization, 2010). In the most recent global burden of disease study, high blood pressure was the leading risk factor

contributing to the global disease burden (Lim et al., 2012). A major risk factor for high blood pressure is excess dietary salt consumption (Elliott et al., 1996). Most populations worldwide consume high levels of dietary salt – often exceeding dietary recommendations (Brown et al., 2009). Although there has been recent controversy about the potential health consequences of salt reduction (Alderman and Cohen, 2012; Institute of Medicine, 2013), the majority of research demonstrates that reducing salt intake at the population level will have a significant public health impact (Whelton et al., 2012; Appel et al., 2011). Salt reduction has been shown to be a cost-effective way to reduce cardiovascular disease (Brown et al., 2009; Mason et al., 2014; Cobiac et al., 2010; Barton et al., 2011; Wang and Labarthe, 2011) and is considered a “best buy” for reducing the burden of non-communicable diseases (NCDs) in LMICs (World Economic Forum, 2011; World Bank, 2006).

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In May 2013 Member States approved the Global Monitoring Framework for NCD prevention and control at the World Health Organization General Assembly (World Health Organization, 2013a). The framework includes nine targets and 25 indicators aimed at achieving a 25% reduction in premature deaths from NCDs by 2025 (World Health Organization, 2013a). Of the nine targets, there was only one diet related target – a 30% relative reduction in mean population salt intakes<sup>1</sup> (World Health Organization, 2013a). In order to accomplish this, the Global Action Plan for NCD prevention and control suggests developing “guidelines, recommendations or policy measures that engage different relevant sectors, such as food producers and processors, and other relevant commercial operators, as well as consumers, to reduce the level of salt/sodium added to food (prepared or processed)” (World Health Organization, 2013b).

In many high-income countries, approximately three quarters of dietary salt intake comes from prepared or processed foods; however, the main contributors to dietary salt consumption differ among countries (He et al., 2012). Although many LMIC populations continue to add significant amounts of salt to food while cooking or at the table, there has been an influx of processed foods in these countries in recent years (Stuckler et al., 2012). Therefore, in addition to ensuring that salt reduction initiatives are aimed at reducing salt added by the consumer, reducing salt levels in processed and prepared foods is imperative.

Prepared and processed foods often contain high amounts of salt (He et al., 2012). The salt found in these foods is often referred to as ‘hidden salt’ given that consumers are often not aware of the high salt content. Where there are large amounts of hidden salt in the food supply, one of the most effective ways to reduce salt consumption may be to encourage the food industry to reduce salt in foods by setting targets or standards for salt levels in different categories of foods that all companies should meet (Vos et al., 2010).

Salt reduction initiatives that aim to reduce salt levels in foods can be either mandatory (salt standards) or voluntary (salt targets). Most salt reduction initiatives to date have taken a voluntary approach to reducing salt levels in foods (Webster et al., 2011); however, there have been a few exceptions where mandatory limits have been put into place. Bulgaria, Belgium, Hungary, The Netherlands and Portugal have mandatory salt standards for a small number of staple food products and Argentina and South Africa have set mandatory salt limits for a more extensive list of processed and, in Argentina’s case, restaurant foods (World Cancer Research Fund International, 2014; Webster et al., 2014).

The UK was the first country to establish comprehensive salt targets and between 2003 and 2011 dietary salt consumption decreased by 1.4 g in the UK (He et al., 2014). Throughout this period there was also a decline in stroke by 40% and ischemic heart disease by 42% – it is likely that salt reduction contributed to these declines (He et al., 2014). This suggests that salt targets could substantially contribute to the global goal to reduce population salt intakes by 30% and help reduce diet-related NCDs, even when they are voluntary.

LMICs may face additional challenges in setting targets for salt levels in foods due to a lack of available data for target development and perhaps, more importantly, a lack of capacity for implementation, enforcement and monitoring. For this reason, they will need to adopt a more practical approach to setting country or region-specific salt targets. The aim of this paper is to propose a step-by-step approach to setting and implementing targets for salt levels in foods for LMICs, which can then be used for voluntary or mandatory policy interventions. It also provides a case study of the

application of this process in the Pacific Islands, where regional targets have now been endorsed.

### An approach to setting salt targets in LMICs

We examined existing literature on setting salt targets and consulted with experts in the field to develop an approach to setting salt targets in LMICs. Fig. 1 outlines the proposed steps that should be taken to set salt reduction targets and provides different options to cater for countries and regions with fewer resources. The main steps include: (1) identifying the main sources of salt in the diet, (2) selecting foods for salt targets, (3) setting target levels in foods, (4) identifying strategies for engagement with stakeholders and (5) establishing mechanisms for monitoring. A brief discussion of the following steps is provided below.

#### *Identifying the main sources of salt in the diet*

Targets for salt levels in foods should be established for the food categories that contribute most to dietary salt consumption. Understanding the contribution of different foods to dietary salt intake is best done using national food consumption data. These data will identify the foods and consumption patterns that are associated with high salt intake. The main ways in which information about food intakes can be obtained are by using: food records, 24-h dietary recalls, food frequency questionnaires (FFQ), household budget surveys, food sales or import data (WHO/PAHO, 2013). The type of information used depends on the availability of existing data and country resources. The existing range of products and their current salt levels need to be obtained through surveys according to the protocol outlined by the Food Monitoring Group (Dunford et al., 2012). Where survey information is not available, and resources do not permit collecting data, information can be obtained through consultation with key stakeholders. A summary of the strengths and limitations of these different means of identifying the main sources of salt in the diet can be found elsewhere (WHO/PAHO, 2013).

#### *Selecting foods for salt targets*

There are two main approaches to selecting which foods should have salt targets: (1) setting targets for all processed food categories (which could also include restaurants) that contribute to salt in the diet and (2) prioritizing specific foods or categories based on salt contribution. Given the limited resources available in most LMICs, it will not always be feasible to set targets for all food categories that contribute to salt in the diet. The preferred approach may be to identify and establish targets for priority product categories based on a number of factors including contribution of salt to the diet and feasibility of making reductions.

#### *Setting targets for salt levels in foods*

As a general rule, if we are trying to reduce population salt intake by 30% and a significant amount of salt in the diet is coming from processed foods, then we need to reduce salt in processed foods by at least 30%, and even more where possible. However, simply setting a generic target to reduce salt levels in all foods by 30% would not be appropriate given that different product categories have specific requirements.

The main considerations to make when setting the target level for salt in foods include: the existing range of products and their current salt levels; how these compare to existing targets from other countries; technical, food safety and consumer acceptability

<sup>1</sup> Sodium and salt are often used interchangeably when referring to dietary salt intake. When referring to dietary salt consumed and the quantity of salt in food we are primarily referring about sodium chloride (NaCl).

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