Guide to estimating the use of iodized salt in industrially processed foods

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The Iodine Global Network has developed new program guidance to help estimate the contribution of processed foods to total salt and potential iodine intake among different population groups.

The 1994, UNICEF-WHO Joint Committee on Health Policy defined universal salt iodization (USI) as iodization of “all salt for human and animal consumption (including salt for food processing) in all countries where iodine deficiency disorders (IDD) are a public health problem” (1). However, global guidance around USI has, to date, focused mainly on adequate iodization of household salt, previously the main dietary source of iodine. There’s now strong evidence that in most regions of the world dietary patterns are shifting towards increased consumption of industrially-processed foods and condiments (2–4), which account for an increasing proportion of total salt intake. For this reason, it’s widely accepted that many national USI strategies need to expand to include food industry salt (5).

The program guidance
IGN has developed new program guidance to help estimate the likely contribution of industrially-processed foods to total salt and potential iodine intake among different population groups. The focus is on salt used by industrially-processed food manufacturers (rather than street vendors, for example), since they account for the largest proportion of salt used by the food industry and may be feasible to include in a regulatory monitoring schedule to ensure adequate iodization levels. The guidance also explains how to conduct a high-level review of existing national legislative frameworks and other factors that may enable expansion of the USI strategy to effectively include industrially-processed food salt.

### Assessment*

1. Estimate the contribution of industrially-processed food salt to salt (and iodized salt) intake among different population groups.

2. Review recent data for household coverage with adequately iodized salt with breakdown by sub-groups where possible.

3. Review recent data for iodine status with breakdown by population sub-groups where possible.

4. Investigate whether there’s a policy and plan to implement salt reduction initiatives

### Question

1. Does industrially processed food salt contribute significantly to dietary salt (and potentially iodine) intake among one or more groups?

2. Is household salt coverage consistently < 90% for any subgroup?

3. Is iodine status inadequate among any population or sub-group?

4. Does salt reduction policy exist, with implementation planned within 12 months?

### Information source

- Recent surveys of diet, household consumption and expenditure, or similar; market/consumer surveys; food industry information; salt industry supply data.

- Recent household surveys including iodized salt use; possibly production and distribution data from the salt industry if known to be reliable.

- Recent household-, school- or clinic-based surveys including assessment of urinary iodine concentration.

- Government implementation and planning documents, verbal information.

### Recommended action based on

**POSITIVE response to one or more questions:**
Conduct where needed a more comprehensive assessment of the contribution of processed foods to total salt intake and of the food industry practices around the use of iodized salt.

Move to review and establish a legislative framework with enabling factors required for strategic change.

**NEGATIVE responses to all four questions:**
An immediate change in strategy may not be essential. However, an action plan should be developed with clear indicators (based on the 4 situational analysis components) to trigger a future strategic shift towards inclusion of processed food salt into the USI strategy where needed.

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* Conduct all 4 processes independently, then review outcomes and interactions.
* Based on best available data from the past 3 years.
* Preferably data from the past 3-5 years.
Thus, the guidance aims to provide program managers with sufficient information to determine:

- The potential impact on population iodine intake if quality-assured iodized salt is used in the production of industrially-processed foods.
- Any gaps and challenges in the current enabling environment for an expanded USI strategy to include industrially-processed foods.

The main audience for the guidance are managers of programs designed to achieve and sustain optimal iodine status, for which salt iodization is the main intervention. It is planned that the final program guidance will be delivered in a modular e-book format and will complement other existing USI-related guidance.

Content of the program guidance

The guidance recommends an analysis of four program components to determine the need to broaden the existing USI strategy to include processed food salt (Table on previous page). Methodologies for assessment of national and sub-national household coverage with iodized salt and of population iodine status are presented in other documents. Therefore, this program guidance focuses on the first component of the analysis: estimating the contribution of processed food salt to total salt and potential iodine intake at the national and sub-national levels. This is facilitated through a framework of recommended steps (Figure 1).

Associated tools include example iodine intake modeling calculations and example methodologies used to proceed through all four framework steps. The example methodologies are based on a combination of country-level experience and additional theory.

The outcome of the national assessments will provide information to determine the need for, and support the development of, an expanded USI strategy to include industrially-processed food salt. The aims of an expanded strategy would include the following:

- Ensure the protection of future generations from a potential decrease in iodine intake due to changes in dietary practices.
- Increase equity of access to iodine through salt, regardless of dietary salt source, especially among populations with poor access to quality-assured iodized household salt.
- Facilitate adjustment of salt iodine standards to an optimum level to accommodate the potential impact of salt reduction initiatives on associated iodine intake.

Field testing

IGN plans to field test the guide in several regions. Field testing will allow feedback on how useful the guide is in assessing the contribution of processed food to iodine intake, how easy the guide is to use, and what changes might enhance its effectiveness. Following feedback, the guidelines will be reviewed and finalized, with planned dissemination by the end of 2018.

References


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**FIGURE 1** Framework to assess the contribution of processed foods to salt and its actual/potential impact on iodine intake.

**Aim:** to identify which industrially-processed foods contribute most significantly to salt intake across consumer groups.

**Purpose:** Helps determine strategic focus, e.g. which food industries to target for communication, advocacy, and technical support.

1. Identify key salt-containing industrially processed foods, and estimate their level of consumption among different population groups/sub-groups.

2. Estimate the salt content of identified key foods and relative contribution to average daily salt intake.

3. Estimate the proportion of the salt used for production of each food that is currently adequately iodized.

4. Model the potential contribution of identified foods to iodine intake for different population groups.

**Aim:** to assess the current and potential contribution of identified foods to iodine intake among different consumer groups.

**Purpose:** To provide an evidence base for the potential impact of using adequately iodized salt in processed foods. It can be used as a communication and advocacy tool for the food industry, Government, and consumer groups.

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a. Example sub-groups: geographic region, residence type, socio-economic. Example population groups: school-age children, women of reproductive age, pregnant women.

b. Where this is not possible due to lack of food industry information, proceed to step 4.