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REGIONAL OFFICE FOR **Europe**

Meeting of the WHO Action Network on Salt Reduction in the Population in the European Region (ESAN)

MEETING REPORT

**9-10 May 2017
Dublin, Ireland**

ABSTRACT

WHO has identified cutting salt intakes as a priority for preventing non-communicable diseases and, globally, countries have already committed to cut salt intakes by 30% between 2010 and 2025. To help facilitate progress in reducing salt intakes, the WHO Action Network on Salt Reduction in the Population in the European Region (ESAN) was established in 2007. The network—which now consists of more than 20 WHO European Region Member States—met in Dublin, Ireland on 9-10 May 2017.

There has been progress in the Region and the salt reduction efforts of many Member States have demonstrated that real and sizeable reductions in salt levels across a range of foods is possible. Tracking the impact on dietary intakes is more difficult, and, although some countries have also been able to demonstrate a drop in average salt intakes, this has not always been possible.

It is clear that progress is uneven and insufficient—no European country is currently on track to meet the global target—and further progress is needed. This may require more use of regulation and mandatory, rather than voluntary, salt contents for particular foods. In addition, there is a role for country-specific intermediate goals to drive forward progress towards the longer-term, global goal. Innovative front-of-pack nutrition labelling shows promise for changing consumer purchases and, potentially, for driving reformulation. Better data are needed to monitor changes in both salt levels and intakes. There is great interest in developing harmonized monitoring of salt in some foods as a tool for both recording progress and highlighting where greater gains are possible.

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BACKGROUND AND INTRODUCTION

Background and aim of the network

The WHO Action Network on Salt Reduction in the Population in the European Region (hereafter referred to as ESAN or ‘the network’) was established in 2007 under the auspices of WHO and with the support of the United Kingdom Food Standards Agency (FSA). Since May 2013 Switzerland has chaired ESAN.

The network was established as a response to the increasing salt consumption of the population, in line with WHO Europe’s designation of salt reduction as a priority intervention for the reduction of noncommunicable diseases (NCDs) in the European population.¹ The network aims to:

- a) promote the identification and sharing of national policies on salt reduction and the types of action undertaken;
- b) describe monitoring and evaluation strategies of salt reduction initiatives;
- c) discuss the public health and cost benefits of salt reduction strategies in different countries;
- d) develop good practice in the area of policy development, implementation, monitoring and evaluation;
- e) promote the development of science and food technology in the relevant areas;
- f) explore the links between salt reduction policies and inequalities.

Organisation of the network

Since May 2013, the Federal Food Safety and Veterinary Office of Switzerland has chaired the network. As of May 2017, the network consists of more than 20 of the WHO European Region Member States. Participants include governmental institutions (or those nominated by government) and representatives of WHO and WHO collaborating centres. The network usually meets once a year, at a meeting organized by the ESAN leading country, in close collaboration with the WHO Regional Office for Europe. The network meeting is an important arena for sharing and discussing experiences in salt reduction strategies.

The 2017 network meeting was held in Dublin, Ireland on 9-10 May 2017. Representatives from 17 countries in the European Region (Austria, Bulgaria, Estonia, France, Greece, Hungary, Ireland, Italy, Israel, Malta, Norway, Portugal, Russian Federation, Slovenia, Sweden, Switzerland and Turkey) participated. In addition, WHO staff from the Regional Office for Europe and Headquarters, representatives of the European Commission and the WHO collaborating centres at the National Institute for Public Health and the Environment (RIVM) in the Netherlands and the George Institute for Global Health, Australia, attended the meeting, along with invited external speakers and a rapporteur.

¹ WHO Regional Office for Europe. *Action Plan for the implementation of the European Strategy on the Prevention and Control of Noncommunicable Diseases (2012-2016)*.

INTRODUCTORY SESSION

Opening addresses

Michael Beer, Federal Food Safety and Veterinary Office, Switzerland, Chair of ESAN, welcomed all participants to the annual meeting and thanked the co-hosts, the Irish Department of Health and the Food Safety Authority of Ireland.

Pamela Byrne, Chief Executive, Food Safety Authority of Ireland, welcomed participants to Dublin and provided some context on developments in Ireland. The Authority has been working hard with industry and state bodies to achieve gradual and sustained reductions in salt levels in food. This has been coupled with work with public analyst laboratories to be able to monitor levels of salt in food and determine population exposure. The resulting data is used for many purposes—feeding into national policy and to discussion fora, such as this network and the EU High Level Group, as well as informing the procurement of public sector food. Significant reductions in salt levels in foods have been achieved, but in 2015 average intakes were still exceeding the 5 g per day limit recommended by WHO. More progress is needed, therefore, along with consumer advocacy, better labelling and greater collaboration across Europe. All of these efforts are complementary to, and supportive of, the Department of Health's National Obesity Policy and Action Plan.

Minister Corcoran Kennedy TD, Minister of State for Health Promotion, Ireland, welcomed all participants to Ireland and formally opened the meeting. She congratulated WHO on its work on nutrition and obesity. Earlier in May 2017, the Minister launched a report on the results of the four rounds of data collection under WHO's Childhood Obesity Surveillance Initiative (COSI) in Ireland between 2008 and 2015.² The results suggest that levels of excess weight in children are stabilising, nonetheless at least one in five children are overweight or obese and, unfortunately, projections suggest that Ireland will become the most obese nation in Europe unless action is taken. Tackling childhood obesity is, therefore, a priority and *Healthy Weight for Ireland: Obesity Policy and Action Plan 2016-2015*, launched in 2016, sets a short-term target for a sustained downward trend in levels of excess weight in children and a reduction in the gap in obesity levels between the highest and lowest socio-economic groups by 10% by 2025.

In relation to salt reduction, Step 3 of the Ten Steps Forward set out in the action plan tasks the Department of Health with '*agreeing food industry reformulation targets and reviewing progress.*' A working group on food reformulation is being established and will consider targets for salt, sugar and fats. Ireland has been working on salt reduction since 2003 and, as outlined previously, the voluntary programme of the Food Safety Authority of Ireland has yielded some significant reductions in the salt content of many processed food such as cereal, breads and some processed meats. The Minister acknowledged the work of Wayne Anderson and Karl McDonald at the Authority in this area, and noted that ESAN has been a useful resource and support for this work.

Since 2013, Food Drink Ireland (FDI), the food industry representative body, has developed a platform to drive the reformulation of processed foods. In 2016, FDI issued a report estimating the health impact of reformulation by some of its food industry members on the Irish population (See Session 3). That report provided a platform to begin measuring the impact of reformulation

² Bel-Serrat S, Heinen MM, Murrin CM, Daly L, Mehegan J, Concannon M, Flood C, Farrell D, O'Brien S, Eldin N, Kelleher CC [2017]. The Childhood Obesity Surveillance Initiative (COSI) in the Republic of Ireland: Findings from 2008, 2010, 2012 and 2015. Dublin: Health Service Executive.

by the industry, now and in the future. The Minister congratulated ESAN members on their progress to date and wished participants a fruitful meeting.

On behalf of WHO Regional Office for Europe, Jo Jewell added some words of welcome and thanked the Department of Health and the Food Safety Authority Ireland for hosting and colleagues from the Swiss Federal Food Safety and Veterinary Office their work in chairing the network. WHO strongly supports this action network as a main vehicle for implementation of one of the priorities set in the *WHO European Region Food and Nutrition Action Plan 2015-2020*—namely, creation of healthy food and drink environments by improving the nutritional quality of foods—and realisation of the global NCD target to reduce salt/sodium intakes by 30% by 2025. New ways of expanding and monitoring national programmes on salt reduction are needed. WHO recognises that this is challenging work, but is encouraged by some results coming from Member States. Presentations from Member States, academics, EU institutions and WHO, along with discussions and exchange between ESAN members, are intended to empower participants to continue their efforts in this area.

To further set the context for the meeting, he presented some very preliminary findings from the recently completed Global Nutrition Policy Review showing progress in the European Region, specifically in relation to reformulation, school health and nutrition policies, marketing of food and non-alcoholic beverages, nutrition labelling and fiscal policies.

SESSION 1: Update on salt reduction strategies within the WHO European Region

Salt modelling in WHO Europe countries

Jacqui Webster, WHO Collaborating Centre on Population Salt Reduction, George Institute for Global Health, Australia, reported on development of salt models to determine agreed targets and/or standards for salt levels in foods.

Every year some journal papers challenge the evidence base and question the rationale for salt reduction. In response, in May 2017 a paper was published with colleagues from WHO, other collaborating centres and academic departments to help explain the science that supports population-wide salt reduction programmes (1). In addition, the Science of Salt Weekly, a research and advocacy project initiated by the World Hypertension League, conducts a weekly systematic review of the literature and produces a summary of relevant studies on salt each week—the vast majority of studies published support the hypothesis that salt reductions are needed.

The Collaborating Centre's 2014 review of salt reduction initiatives around the world found that 75 countries have national programmes in place and at least five new national strategies have been developed since then. Twelve countries had reported a reduction in population salt intake. Of the 75 countries with salt reduction strategies in 2014, food industry salt reduction programmes were identified in 59 and, of these, 38 had targets for salt levels of food and nine countries had mandatory salt targets for some products or categories of food. There is increasing use of legislation to mandate the maximum salt content of food, the vast majority of which relate to bread.

Establishing salt level targets for foods is a means of creating a level playing field for food manufacturers and of overcoming many of the barriers to reducing salt levels in foods. There are several key steps in the process of developing salt targets:

1. Identifying sources of salt in the diet (what proportion comes from packaged foods, eating out, salt added during cooking and the table)
2. Select foods for target setting
3. Select targets
4. Engage with stakeholders
5. Monitor progress.

The most comprehensive way of setting targets is to identify sources of salt in the diet and then develop a model to demonstrate by how much salt levels need to reduce to achieve the population targets. The UK was the first country to do this, development of a salt model highlighted that approximately 80% of salt consumed was in bought foods and produced estimates that a 40% reduction in salt added by the food industry would be required to reduce intakes in line with the national target. In this successful example, strong government leadership and well-monitored voluntary targets for salt levels in foods were key, with support from government-funded behaviour change campaigns and front-of-pack labelling. By 2012, salt intake had fallen by 1.4 g per person per day and there have been parallel reductions in blood pressure and stroke mortality, estimated to be saving 8,500 lives every year (2). Most targets in Europe have been based on dietary survey data. In New Zealand, in contrast, sales data and food composition data were used to estimate salt intakes and set targets.

The WHO Regional Office for Europe has supported the Collaborating Centre to do work examining available sources of data to inform the development of salt models in selected European countries. Simulation modelling methodology should be widely applicable throughout the Region, enabling countries to set targets for reformulation that—when combined with behaviour change to moderate salt intakes by using less discretionary salt or reducing consumption of foods that are high in sodium but cannot be reformulated—will enable the target for population salt intake to be achieved.

Experience in Australia demonstrates the importance of setting salt targets for foods—in 2017, 81% of breads covered by salt targets met the targets (compared to 37% in 2010) while only 49% of products not covered by the targets would meet the targets.

Discussion

There was some discussion of whether iodine levels had been increased as salt levels in bread were reduced in Australia. In fact, it had not been considered necessary to increase iodine levels because the reductions of salt in bread were still relatively small.

For the modelling project, it has certainly been challenging to identify Member States with all the data sources required for the modelling of salt targets, but this will be a useful tool throughout the Region.

There is evidence that multinational food manufacturers are producing international products with different salt levels for different markets. Countries where companies have higher sugar levels may also be those where there are higher salt levels. A push for consistent levels across countries would be very helpful, and, to this end, there could be a useful role for global targets for salt levels in particular foods.

Developments from France relating to front-of-pack labelling—focus on relevance for salt

Michel Chauliac, General Directorate of Health, France, provided an update on recent developments in France and an overview of the process of introducing a new front-of-pack nutrition labelling scheme.

Since 2007 a strategy for improving the nutritional quality of common foods has been in operation, under the umbrella of the global, multisectoral nutrition policy in place since 2001 (the National Health and Nutrition Programme). The reformulation programme involves voluntary commitments made by industry but reviewed and approved or rejected by a government committee. Because of the major challenges associated with social inequalities, the committee only accepts commitments where two-thirds of a company's production will be improved. So far, of the 38 commitments signed, 26 relate to reducing salt and 1,660 tonnes of salt were withdrawn from the market each year in 2012 and 2013. The reality is that this represents very little on a population basis, and since 2014 there have been very few proposals for new commitments.

Since 2008 an observatory of food quality (*OQALI*) has monitored the food supply by analysing data on processed products from the food sector, and carries out comparisons both within and across product categories. This type of monitoring can highlight food categories where there is a high degree of variability between products as well as pointing to categories where there is a lot of scope for some companies to make significant improvements. Testing of this methodology in Romania and Austria suggests that it is not too difficult or expensive to replicate.

In 2016 a new French health law (Law no 2016-41) introduced the possibility of putting extra nutrition information on food labels. A broad consultation involving consumers, producers, retailers and scientists resulted in a proposal for a 'real conditions' study to analyse the impact of front-of-pack nutrition labelling on the nutritional quality of food purchases. A protocol was developed to compare four systems: two that summarise nutrition information (*Nutri Score* and *Sens*) and two that give nutrient-specific information (*Nutri Repère* and *Nutri Couleurs* (multiple traffic lights)). The study took place over one week between September and December 2016 on the shelves of 60 supermarkets from three retailers, covering a total of around 1,300 products (fresh prepared foods, industrial sweet breads and croissants, breads and industrial pastries and prepared canned foods). Purchase data were collected and the nutritional quality of shopping baskets analysed using the UK Food Standards Agency (FSA) score.

Three of the four systems significantly improved the nutritional quality of the foods purchased. The greatest improvements were seen with the Nutri-Score system. For Nutri-Score the improvement was even greater among those buying low price products. A questionnaire exploring comprehension of the labels found that Nutri-Score and Sens were the most readable, with the best results for comprehension. Furthermore, an experiment conducted in a 'virtual supermarket' found similar results—greatest improvements in the nutritional quality of virtual shopping baskets were seen with Nutri-Score.

NUTRI SCORE



In April 2017 a draft decree establishing this as the form of labelling recommended by the State was notified to the European Commission. Also in April 2017, the ministers of health, agriculture and consumer affairs with some producers signed a charter of commitment to use the Nutri-Score label. The study will be published in a peer-reviewed journal.³

In conclusion, reformulation, front-of-pack labelling and monitoring of nutritional quality are three synergistic pillars of a single objective; improving nutritional quality of consumer purchases. It is worth considering whether Europe should move towards harmonization of nutritional quality monitoring systems and front-of-pack labelling schemes.

Discussion

There was some clarification of how the Nutri-Score system works. Based on the FSA scoring system—which takes into account negative points for content of energy, sugars, saturated fat and sodium and positive points for fruit, vegetables, pulses, nuts, fibre and (sometimes) protein—a food is given a total score between -15 (the best) and 40. Cut-offs have then been applied to define the five categories of the Nutri-Score label: A=minimum to -1 (Dark green); B=0 to 2 (Light green); C=3 to 10 (Light orange); D=11 to 18 (Medium orange); E=19 to maximum (Dark orange).

In relation to checking the label scores, all the necessary data already have to be included on the mandatory nutrition declaration. Any consumer could, therefore, check the score in theory. Normal trading standards inspections, etc., will check the veracity of the label information.

Trans fatty acids are not included in the score because the government considers that these can be dealt with by other means.

There was clarification that in some categories there was adjustment to the score's algorithm because it was difficult to obtain a complete range of Nutri-Score colours within the category (e.g. cheese). In addition, within the beverages category only water can be given an A (green) Nutri-Score. There was clarification that a food which is high in sodium or sugars could obtain a better score if fibre or fruit were added, but such a food would never be labelled with the top score (A).

The study focused on family purchasing and did not look at children's understanding or purchases.

It is interesting to note that this research suggests this system is effective, while at the same time there have been concerns about the lack of effectiveness of the CHOICES logo in the Netherlands.

In relation to the OQALI data, there was clarification that it is possible to look at the market share of particular products and to combine with nutritionally quality data. Relative market shares can be depicted on scatter diagrams of study results (bigger circles reflect more of the product entering the market).

³ Crosseto et al, Modification des achats alimentaires en réponse à cinq logos nutritionnels. Cahiers de nutrition et diététique (in press).

Country updates

A number of Member State representatives gave brief updates on developments at the national level.

Ireland

Karl McDonald, Food Safety Authority of Ireland, provided an update on salt reduction efforts in Ireland.

Between 2003 and 2017 a programme has been in place to reduce salt in processed meats, a major contributor of sodium to Irish diets and decreases have been achieved in the main products. These range from an 11% reduction in sausages to a 27% decrease in the salt content of rashers of bacon between 2004 and 2015. As well as a decrease in average sodium contents, there has been a narrowing of the range between the highest and lowest sodium contents within the bacon rashers and cooked ham categories. These are considerable achievements, but they have taken a long time to realise through a strategy of gradual, voluntary reductions.

The programme to reduce salt in bread products, ongoing since 2003, has also resulted in considerable reductions—a 17% reduction in salt in white bread, a 25% reduction in wholemeal, 28% in wholegrain and 42% in specialty breads. In the spreadable fats category, sodium has been reduced by 28% in blended spreads and 27% in all blends and blended spreads since 2007. While in breakfast cereals, reductions of 48%, 39%, 63% and 38% have been achieved in the sodium content of, respectively, rice-based cereals, bran-based cereals, cornflake-based cereals and multi-grain cereals since 2003.

The work is ongoing and in 2017-18 will include development of guidelines for industry on the use of potassium and other mineral-based salt replacement ingredients, continuing discussions with Food Drink Ireland on verification of industry commitments across wider reformulation, annual monitoring of sodium in over 100 food products and further investigation of a potential 24-hour urinary sodium excretion study in Ireland.

Greece

George Marakis, Hellenic Food Authority, presented an update on activities in Greece and, in particular, the Salt Intake in Northern Greece (SING) study.

The SING study aimed to measure sodium and potassium intake in healthy adults in Thessaloniki Greater Metropolitan Area. People with medical diagnosis of hypertension and several other medical conditions, as well as pregnant and lactating women were excluded. The study took place between February 2015 and March 2016. Steps were taken to avoid recruiting volunteers with a particular interest in salt or blood pressure. Anthropometric and basic dietary data, along with data on knowledge, attitude and behaviour towards salt, were collected. Intakes were estimated by a single 24-hour urine collection. Quality control steps taken included rejection of urine collection if a sample was missed or the timing of the collection fell outside the range, if less than 500 ml urine was collected or urinary creatinine was less than two standard deviations from the mean.

The final sample included 252 urine collections from 114 men and 138 women. In relation to age and BMI the sample was similar to the population, while there was slight over-representation of university graduates. Average salt intakes were 10.7 g per day, higher in men (11.9 g) than in

women (9.7 g). Only 5.6% of participants had a salt intake lower than 5 g per day, as recommended by WHO, and only 2.8% of sample participants had a ratio of sodium to potassium level in line with WHO's recommendation. Examination of differences in sodium intakes and in sodium to potassium ratios between people with different degrees of adherence to the Mediterranean diet patterns found no significant differences.

Other activities to report include production of an infographic on salt by the Hellenic Diet Association, ongoing actions to raise awareness in the general population, in schools, and among health professionals and bakers, and planning data collection on salt in processed meats.

Discussion

There was discussion about the importance of cooking practices—that is why the Hellenic Food Authority has tried to promote use of dried and fresh herbs.

There was some comment on the findings that sodium intakes did not differ according to levels of Mediterranean diet adherence. These findings are different to those found in the SINU study in Italy (see later in this report). WHO is in the process of developing guidelines on dietary patterns, and it is challenging to define a Mediterranean diet. The SING study did not look at the association between levels of fat and sodium in the diets. In fact, a simple analysis was conducted and it may be interesting to explore this area further.

Norway

Henriette Øien, Norwegian Directorate of Health, gave an update on salt reduction strategies in Norway.

The Norwegian action plan on salt reduction, published in June 2014, sets a goal for a 15% reduction in salt intake by 2018 and a 30% reduction by 2025. The action plan focuses on four areas—namely, communication, labelling, monitoring and a partnership for salt reduction to achieve less salt in processed food and served meals. A further area of focus is evaluation.

The Salt Partnership brings together actors from the food and catering industries, authorities, research institutes, trade associations, consumer organizations and NGOs to work together on reducing the salt content in processed foods and served foods in order to achieve the goal of a 15 per cent reduction in the population's salt intake by 2018 and a 30% reduction by 2025. There are six working groups—one for each food group and one for served foods—all run by the food industry. The Partnership Board is led by the Norwegian Directorate of Health and includes representatives from each working group, as well as other stakeholders. Four work packages cover communication to raise consumer awareness, collective work on salt reduction targets, a common monitoring system to follow salt reduction over time and research to facilitate achievement of the goals. As of February 2017, 62 partners had signed the partnership agreement.⁴

In 2016, a communication campaign was initiated to raise awareness of the health risks associated with eating too much salt. The campaign was well received and received a lot of attention both in social- and traditional media. A similar campaign was carried out in 2017. A seminar on salt and salt reduction was held in November 2016, about one year after the launch of

⁴ <https://helsedirektoratet.no/english/salt-and-the-salt-partnership>

the Salt Partnership. In addition, a salt school to improve healthy cooking and food preparation the catering sector was launched in November 2016.

Consumer research suggests that consumers are paying more attention to salt levels when buying food—the awareness on salt increased between 2013 and 2015. Monitoring of both salt intakes and salt levels in processed foods is undertaken. For intakes, a urinary excretion study in Tromsø County has been conducted and results will be presented in 2017. Monitoring of salt content in processed foods – using a database called Tradesolution designed by and for the food industry – is ongoing. In addition, 200 indicator products are monitored by food analysis. A logo for the Salt Partnership has been designed to illustrate that partners are part of the effort to reduce salt intake, but this cannot be linked to a single product in commercial communication.

An intention agreement on facilitating a healthier diet, with specific targets for the reduction of intakes of sugar, salt and saturated fats and for the increased consumption of fruit, vegetables, fish and wholegrain products, was signed in December 2016 by food industry sectors and the health minister. As part of this, parties have committed to continue to work towards reducing salt intakes from 10 g per day to 8 g day by 2021, with progress reporting in 2019.

Discussion

There was interest in more information on the Salt School initiative. There is some information on the Salt Partnership website, but it is only currently available in Norwegian.

There was clarification that the national dietary surveys do not have exact data on discretionary salt, so an estimated extra 10-15% is added to salt intakes.

Portugal

Mariana Santos, National Institute for Health Dr Ricardo Jorge, gave an update on salt reduction strategies in Portugal.

The latest data from the National Food, Nutrition and Physical Activity Survey (2014-2016), using 24-hour urine collection, estimates average daily intake of salt to be 7.3 g (higher in males) and found that nearly two thirds of women (65.5%) and 85.9% of men have a sodium intake above the Tolerable Upper Intake Level. The foods that contribute most sodium to the diet are bread and toasts, sausages, delicatessen products and soup.

Strategies for reducing salt consumption through food reformulation aim to promote:

- Further reductions in the salt content of bread (to achieve levels reached in other countries)
- The gradual decrease in salt contents of processed foods
- A gradual reduction in salt content of meals served in restaurants.

In relation to bread, a study involving the bakery industry was conducted in the north of Portugal. It aimed to explore practices around salt usage during bread preparation and to evaluate an intervention focused on salt reduction in the preparation of bread. The salt contents of bread rolls, *pão da avó*, corn bread and *regueifa* were all below the mandatory limit. The values for the reference group of bakeries (control) tended to be lower than the values for the bakeries chosen for intervention. After the end of the intervention to bring salt levels down to 1.0 g salt per 100 g of bread, salt levels were lower in the intervention breads than the non-intervention breads for all four types. For bread rolls it was not possible for the industrial process to reduce levels to below

1.2 g of salt. Two months after the end of the study there was further sampling of bread rolls in intervention bakeries from Aveiro and Oporto districts and values remained similar.

In conclusion, the salt content of bread from these bakeries in the north of Portugal is already less than the maximum salt level set by law. It is possible to obtain bread with significantly less salt (1.2 g /100 g for bread rolls and 1.0 g / 100 g for the other types) without changing the main properties. It is important, therefore, to maintain a dialogue with bakeries. In the future, there are plans to expand this process of salt reduction in bread to the whole country, to set target levels for salt in bread and bread products (and lower the mandatory maximum level) and to implement salt reduction strategies in community settings, including schools and hospitals.

Discussion

There was clarification that a further investigation of these breads is planned for six months after the end of the intervention to monitor whether salt levels have changed. There are also plans to expand this process to monitor some “sentinel foods” and school meals. There are also plans to set specific salt targets for restaurant foods and school foods, as well as other food products to be identified through the monitoring process.

Slovenia

Cirila Hlastan Ribič, National Institute of Public Health, provided an update on efforts to reduce population salt intakes in Slovenia.

A National Action Plan to Decrease Dietary Salt Consumption in the Slovenian Population in the 2010-2020 Period set out a comprehensive programme for food industry, health care workers and the population. The specific goals are to gradually decrease salt intake for adults from 12 g per day to 5 g per day, and for children to decrease from 5 g/d to 3 g/d.

The overall approach is based on three pillars: healthier food, food products and meals; promoting health and consumer education; and better blood pressure monitoring in primary health care.

The strategy for healthier food, food products and meals is to decrease salt content gradually through agreement with the food and catering industry in a wide range of food products and in meals eaten away from home. This involves monitoring sodium content in targeted food products and meals. The agreement with the food and catering has still to be signed—it is hoped that it will be signed in the near future to cover a wide range of products.

Specific activities have included: measurement of average daily salt intakes in a representative sample of adult population with 24-hour urinary excretion methodology; estimation of the main groups of foods rich in salt from household budget survey data; monitoring of salt content in bread, meat products and meals eaten away from home; a national promotion campaign to reduce salt intake and evaluation of its impact; a sustained partnership approach with the food industry to gradually decrease salt levels; and cooperation with health workers.

The main messages of the national health promotion campaign are that excessive consumption of salt is harmful to health, enjoy food with less salt and do not add salt at the table out of habit. These messages were conveyed through print and online materials.⁵ An evaluation of the impact of the campaign found that 45.9% of respondents had seen the campaign.

⁵ See <http://nesoli.si/>

Salt intakes, estimated by 24-hour urine collection, decreased from 14.3 g per day to 12.9 g in men between 2007 (n=146) and 2012 (n=110). For women, there was a small decrease from 11 to 10.7 g per day (3). Key sources of dietary salt (not including ready made meals, semi-prepared foods or discretionary salt) were bread and bakery products (35%), meat products (28%), processed vegetables (6.6%) and cheeses (5.3%), based on household food purchase data from 2000 to 2009 (4). There was a slow decline in sodium available from bread between 2000 and 2009. Mean salt content in bread declined from 1.5 g per 100g in 2007 to 1.36 g in 2010 and 1.35 g in 2012. The salt content in some meal samples is extremely high—20% of samples provided more than 10 g of salt per meal.

Specific activities in 2016/17 include monitoring the use of salt by providers of student meals, an area where there is high variability and poor levels of awareness among providers. In addition, health promotion and consumer education are ongoing, with November the traditional month for a salt campaign, and a leaflet on how to check blood pressure has been published as part of activities to improve blood pressure control in primary health care.

In conclusion, despite some reductions the salt intake in the Slovenian population remains high. The National salt reduction programme should focus on collaboration with the food industry and on production of low-salt or reduced-salt foods, and needs to be implemented through combined efforts. Monitoring of total salt intake should be combined with monitoring of the iodine supply in Slovenia to assess if current recommendations for salt fortification need to be revised. The approach adopted appears to be appropriate, but progress is somewhat slower than expected.

SESSION 2: Estimating salt intake with dietary assessment methods

Measuring the effectiveness of salt intake intervention: Can a sodium and potassium specific Food Record Checklist complement or replace 24-hour and spot-urine collections?

Sigrid Beer-Borst, University of Bern, presented an overview of research into different methodologies for measuring salt intake and the effectiveness of salt interventions.

In Switzerland, as elsewhere, it is challenging to monitor population salt intakes in an accurate, reliable and affordable manner. The 24-hour urinary sodium excretion method is the gold standard, but is burdensome and very costly, while spot urine analyses are known to be less reliable. Food consumption surveys have their usual limitations and are particularly weak in relation to discretionary salt use. In addition, there are limitations with the data on salt levels in food composition databases.

In the framework of a one-year workplace intervention trial conducted in German speaking Switzerland in 2015/16 the research group compared different methods for measuring salt intakes. This included use of a specially designed sodium and potassium specific Food Record Checklist. The findings of this study, when published, could be useful for informing design of an effective, practical and affordable monitoring system for population intakes, possibly by using a combination of different methods.⁶

⁶ For information about the project and related publications:

- <http://www.nfp69.ch/en/projects/how-can-people-achieve-a-healthy-diet/project-salt-consumption>
- <https://boris.unibe.ch/id/project/841>

The SINU questionnaire on awareness and behaviour concerning salt

Professor Pasquale Strazzullo, University of Naples, described development of a questionnaire on awareness and behaviour concerning salt intake.

Salt awareness, one element of health literacy, is one of many factors that can feed into the individual choices which, in part, determine salt intakes. A questionnaire—the SINU questionnaire—has been developed to assess awareness and behaviour in relation to salt intakes. The anonymous questionnaire, which contains only basic demographic information, comprises 14 questions on awareness, 10 items on behaviour (through 17 questions) and adherence to the Mediterranean Diet through four items (four questions). A Likert scale is used for all questions and, because the respondent is provided with real time feedback on the extent of their awareness and salt-related behaviour, the questionnaire may also have an educational value.

Between June 2016 and March 2017, 4,961 respondents in Italy voluntarily completed the online questionnaire. Preliminary results (note: the sample is not representative) suggest that 30% of respondents did not think that a low salt intake was very important at the start of the questionnaire, and while nearly two-thirds claimed to be aware of the 5 g a day recommendation, there was poor awareness of the high salt levels in bread and pizza. Few people (c. 15%) always use salt information on labels to guide food choices. The most frequent strategy for moderating salt intakes was not adding salt at the table (or very little). Yet, addition of salt during cooking or consumption (or both) was frequent for vegetables, pasta, rice or other cereals, meat or fish, or fried foods. The majority of people said they do not feel thirsty after meals and only around a third consider that food tastes salty when they eat out. Over half of respondents estimated their own salt intake to be between 5 g and 10 g and 30% think their intakes are less than 5 g per day (measurements of salt intakes in the population suggest that only 6-7% meet this target).

A score for awareness of salt consumption ranges from 0-28 and can be split into four grades. Very few of the respondents achieved the highest grade (IV). Awareness tended to increase with age and with level of education. A composite score for behaviour on salt consumption ranges from 0 to 26 and stratified into four grades. Among respondents, results for behaviour were worse than those for awareness. Reported behaviour was better among people with higher level of education and employment.

Analysis by level of adherence to the Mediterranean diet found very low levels of strict adherence to the dietary pattern. Greater adherence to the Mediterranean diet is associated with both better awareness and behaviour in relation to salt.

In conclusion, the questionnaire was well accepted by the large majority of users. The 23% gender difference between 24-hour urinary excretion studies in the Italian adult population (MINISAL study) matches the 23% gender difference in salt awareness and 20% difference in salt behaviour. Salt awareness and salt behaviour share similar relationships as 24-hour sodium excretion to age, educational degree and occupational level. A higher degree of adherence to the Mediterranean diet is associated with a significant trend of greater awareness and better behaviour on salt intake, similar to that observed in a few cohort studies using food frequency

questionnaires to assess nutrient intakes. Opportunities to test responses to this questionnaire against 24-hour urinary excretion studies are currently being explored and one national survey of hypertensive patients is ongoing. This work is with a view to improving the questionnaire's predictive ability in relation to 24-hour urinary sodium excretion results.

Discussion

There was clarification about the cut-offs for the grading of the Mediterranean diet—less than 13 positive replies implies Grade 1 (less than four points on a scale of 0-8). There was also discussion of the difference between these results and the Greek findings of no association between salt intakes and adherence to Mediterranean diet. There was clarification that the SINU questionnaire is all multiple choice and it was suggested that this could potentially boost the apparent levels of awareness about, for example, recommended intakes. In the Greek study there were very low levels of understanding and awareness.

SESSION 3: Exploring impact: what are the changes we can measure?

Salt reductions in some foods and no changes in daily salt intake in the Netherlands

Elisabeth HM Temme, RIVM, Netherlands, provided an overview of salt reduction initiatives in the Netherlands and presented results of monitoring of salt levels in foods over a 5-year period and results of estimated salt intakes over a 10-year period.

The Netherlands salt reduction strategy started with a voluntary task force, before, in 2014, an agreement on improvement of product composition was signed as a public-private partnership. This agreement was signed by the food industry, retailers and caterers, under the supervision of the Ministry of Health. Product category agreements have been signed for bread, cheese, canned vegetables, sliced cold meats, sauces, soups, meat products, ready meals, and salty snacks. Further agreements on cheese spread, ready meal pizzas, savoury bread snacks, deep fried snacks, breakfast cereals, additional crisps category and meat products (hamburgers) are planned for 2017.

The salt contents of a selection of processed foods contributing more than 3% to daily intakes and foods with maximum salt levels have been monitored since 2011. The 2011 food composition table was taken as a reference and data has been collected in 2014 and 2016. The data collected in 2016 was a combination of label information (n=3524), analytical data from the food safety authority (n=1108) and specific data from the bread sector. Compared with 2011, there have been some significant reductions in salt contents of bread (-19%), potato crisps (-26%), sauces (-8% to -19%) and soups (-3% to -12%). Some other categories reported no change or non-significant differences. Several foods with maximum salt levels also saw significant reductions (meal sauces including pasta sauce, ketchup, curry ketchup and soup).

To monitor salt intakes, a 24-hour urinary sodium excretion study was carried out among 328 adults aged 19-70 years from Doetinchem. The results do not show any statistically significant differences.

Thus, despite salt reductions in some foods, no changes in daily salt intakes have been observed. A combination of reformulation and education is needed, therefore, to bring about reductions. It

is important to design reformulation initiatives with sufficient scale and ambition (reductions of about 30-40%) and consider whether a mandatory or voluntary approach is more appropriate.

In relation to monitoring, there may be issues around the quality of the label information, which is sometimes calculated from existing food composition tables, and the comprehensiveness or representativeness of the data collected, in relation to the entire food supply. In future, GS1 data may be used for monitoring, and any information from Member States with experience of using this system would be very helpful. It is also possible that the Doetinchem population, from which the sample was taken, is not representative of the Dutch population.

Discussion

This example clearly illustrates the challenges involved in demonstrating impact of public health initiatives. There was some discussion of possible reasons why the salt intake estimates have not decreased when monitoring suggests that the levels have dropped in many foods. It may be that more work on education and behaviour change is needed. The most recent data from the national food consumption survey is yet to be analysed for salt intakes. Given concerns about the lack of sensitivity of food consumption methodology, the Netherlands is considering using bar code data to ensure capture of more precise product and brand data.

RICHFIELDS—Designing a world-class infrastructure to facilitate research

Monique Raats, University of Surrey, UK, presented an overview of the RICHFIELDS project to explore use of existing data sets and design a research infrastructure for food and health.

Currently, existing data sets are insufficient to enable full understanding of consumer behaviour, product development and public health policies. Yet, every day consumers and businesses are generating new data (big data), which is under utilized. There is, therefore, a potential to link these different datasets together to improve understanding of food and health issues.

RICHFIELDS will (i) identify data generated by consumers (e.g. apps), (ii) connect business and research-generated data and (iii) feed these into the design of an appropriate research infrastructure that will enable maximizing the utility of data collected. The main aim is to identify existing or develop new methods for linking different types of food-related data to enable knowledge sharing and reuse and to provide easy access to different types of food-related data. This will require consideration of issues around IT needs, governance, transparency and the ethics of using data for a different purpose than that for which it was originally collected.

Consumer-generated data is often collected by mobile apps relating to different activities such as food purchasing (knowledge and understanding, planning and organisation, making purchases, financial understanding) and food preparation (planning and organisation, knowledge and understanding and meal preparation/cooking) and food consumption (behaviour change, medical support, food logging). The project examined some prototypical food purchasing and food preparation apps to identify the types of data collected and characterise the apps according to relevant descriptive, scientific, technical and legal criteria. In relation to technical criteria, for example, it is possible to characterise apps according to the method used to access data (e.g., file, Api, email export, hardware api, SDK). For legal criteria, apps can be assessed for the type of personal identifiable information collected, whether the tool provides 'terms of use' documentation and/or a privacy policy and who holds ownership of the user-generated data.

There is considerable potential to use contextual food-related data because tools also collect other relevant data, such as physical activity, physical health and social interaction. In addition, the interconnectedness of tools and platforms opens further opportunities to enrich data, although this also poses challenges for privacy and sharing. Aggregate social media and search data has the potential to provide surprising insights and even to reveal determinants. Such data also has limitations, including the existence of potentially important gaps in relation to some determinants of food consumption, a focus on individual-level determinants and neglect of determinants that may be related to the environment, culture or interaction with others.

The next steps will be to attempt to articulate what a research infrastructure should look like. The most likely form would be a data platform supported by materials and standards (e.g., data catalogues to identify and describe data, research protocols, standardised vocabulary, etc.). In addition, a transparent governance and ethical framework needs to be established. In this way the research community may be able to extend and maximise the tools available in spite of increasingly restricted resources.

Discussion

It was agreed that this potential wealth of data could be a valuable addition to knowledge about consumer behaviour in relation to food. There was also some concern voiced, however, about how such an infrastructure could open up the possibilities for misuse of data. Alternatively, it is possible that such an infrastructure could help stop inappropriate use of data which currently takes place. There is some concern about possible ‘over-digitization’ of life and the potential that this might increase socioeconomic inequalities. It may be that this work on developing a research infrastructure concludes that certain types of data need to be excluded. This whole question is a central issue and it was agreed that it is important for scientists to work with philosophers and ethicists to help address questions on privacy, ethics, etc.

Reformulation and product evolution—real life impact of food industry initiatives

Kevin McPartlan, Food Drink Ireland, presented an overview of the FDI/Crème Global Reformulation Project and the FDI/Crème Global Low and NoCal/Sugar project which estimated the impact on the Irish population of reformulation of products by FDI members.

The projects first estimated the levels of nutrients sold, by combining data on the nutrient/ingredient concentration in products with sales data, and then estimated the impact of dietary intakes of the nutrients in question on the basis of dietary surveys on children, adolescents and adults. The Reformulation project covered five nutrients/ingredients (energy, total fat, saturated fat, sodium and sugar) in around 600 products in nine categories (beverages; biscuits, cakes and confectionery; breakfast cereals; meat, fish and egg dishes; milk and dairy products; rice, pasta and savouries; savoury snacks; soups, sauces and miscellaneous foods; and spreading fats). The Low and No Cal/Sugar project focused specifically on beverages and estimated impact on energy and sugar. Estimates were calculated for the baseline in 2005 and post-reformulation in 2012.

The Reformulation project estimated that in the products sold by 14 FDI members (representing about a quarter of the national grocery basket) there had been a 36.7% reduction in the level of sodium sold. There were also reductions in the levels sold of total fat (9.9%), saturated fat (12.0%), energy (11.6%) and sugar (13.8%). Conservative and optimistic estimates of the impact

on intakes of the Irish population were then calculated, with the optimistic estimate representing what could be achieved if the results were applied right across the sector. For sodium the conservative estimates of reductions were 8.3% in adults, 10.3% in teenagers, 9.4% in children and 8.1% in pre-school aged children. The mean optimistic estimate was a 45% reduction in sodium with estimates of 45.1%, 38.7%, 29.9% and 36.7% for adults, teenagers, children and pre-school age children respectively. Reductions were also reported for other nutrients, but of a smaller magnitude—the mean optimistic reductions were 7% for total fat, 23% for saturated fat, 14% for sugar and 4% for energy.

The results suggest that great salt reductions have been achieved in recent years through the FSAI salt reduction programme and that a mean reduction of sodium intake of 45% can be achieved. It is important to understand, however, that there are likely to be diminishing returns from further reformulation efforts in future for those products where a certain amount of salt is needed for technical reasons.

The findings of the Low and No Cal/Sugar project, which looked at carbonated beverages (diet and non diet), squashes, cordials and fruit juice drinks, suggest that there was a reduction of between 14.6% and 22.4% in energy and 14.2% and 23.3% in sugar between baseline and follow-up, reflecting product changes including reformulation. This translates to a 2.1% reduction in sugar intakes and a 0.5% reduction in energy intakes for teenagers, rising to 2.5% and 0.59% respectively for high consumers.

FDI member efforts have thus been successfully quantified in these projects and the impact and shifts in consumer intakes have been shown. Next steps will include recruiting more companies, conducting analyses for the 2013-2015 period and issuing a second report. In addition, support will be provided to engage small and medium sized companies and data will be included on package/portion sizes. FDI is also considering assessing the public health impact of fortification.

Discussion

There was discussion about the apparent disconnect between data showing huge reductions in salt levels in food and studies on real intakes—from France and the Netherlands, for example—which do not reflect any drop in consumption. Better understanding of this issue is needed.

The study does not provide any data on what is being used to replace nutrients, such as saturated fat. There was clarification that the estimated intake data includes both changes in food consumption (changing dietary patterns) and changes in product formulation. The conservative estimates reflect the actual changes recorded and the optimistic estimates reflect the changes that would be achieved were the changes applied right across the whole market.

There was clarification that FDI is not aware of Irish manufacturers exporting foods to other countries with different nutrient levels for different countries, and it would be very critical of any of its members were they to do so.

It can be challenging to motivate small and medium enterprises (SMEs) to reformulate to reduce salt, when their traditional selling point is often taste and their products are often unpackaged so, therefore, do not have to be labelled with a salt declaration. In order to engage these companies it will help to explain that changes can be made with minimal expense (and there may be financial support from bigger companies). Companies are often keen to benefit from the halo effect associated with reformulation efforts.

There was some debate about concerns that a heavy emphasis on a fortification approach may be of more benefit to marketers than to public health. The focus of FDI's fortification work will not only be on vitamins and minerals, there will also be a focus on fibre and wholegrain. Capturing data on this area may be able to encourage change.

SESSION 4: Workshop

Highlights from ESAN meeting 2017 and implications for future work

João Breda, WHO Regional Office for Europe, set the context for workshop discussions by presenting a summary of main messages and emerging questions from the first sessions of the meeting.

Dr Breda thanked all Member States for their continued commitment to the network and their efforts on salt reduction. It is clear that even more action is needed, particularly if the global target of reducing salt intakes by 30% by 2025 is to be achieved. Despite the many examples of successful action, at the current rate of progress no European country is on track to meet the salt reduction target. There remains, therefore, considerable room for further progress.

In relation to product reformulation, the meeting had heard that demonstrating sizeable reductions in salt content in different categories of food has been possible and that existing models for setting targets can be applied and/or adapted for different countries. Tracking the impact of these changes on actual dietary intakes has been more difficult, and it has not always been possible to show reduction in salt intake.

It would be good to aim for similar targets across the Region over time, to ensure that composition of foods is as harmonized as possible across the Region, avoiding higher salt content in some countries. Countries where targets and monitoring programmes have not been established require support, and a coordinated approach could help. It is time to consider whether mandatory criteria would be better for some countries and product categories. A key challenge is to be able to continue to incentivize industry to progressively reduce salt and renew their commitments.

Better data is needed to monitor intakes, more and more countries are doing 24-hour excretion studies and these remain the gold standard, although the methodology is expensive and it is difficult to get a good sample and compliance. Nevertheless, other methods—including spot urine, food checklists, dietary surveys and salt intake calculations—have validity issues. New methods might be needed—and a cycle of combined monitoring methods (such as a 24-hour surveys and food checklists) could increase availability of timely data while saving resources. Using checklists can be interesting to compare dietary patterns and salt intake (e.g., adherence to Mediterranean) but cannot necessarily predict salt intake. Food composition databases need to be updated and expanded to cover branded foods if they are to be useful.

There have been interesting developments in relation to nutrition labelling; France is using the Nutri-Score label, a colour-coded summary indicator, to drive reformulation efforts and influence consumer demand for healthier products. The Nutri-Score was selected after it consistently performed well in studies, particularly among groups with lower socio-economic status, but other relevant labelling initiatives are also worth consideration (e.g., salt warning labels, Keyhole). Other countries can learn from these experiences and a renewed focus on the

use of interpretative or ‘directive’ front-of-pack labels is needed. Countries will need to monitor the use and impact of labels, including on different groups within the population.

A number of possible areas are suggested for ESAN members to consider for further collaboration to strengthen salt reduction:

- Collaborating on development and alignment of product specific targets
- Expanding existing and tested methods of monitoring composition to other countries
- Modelling the health impact of efforts
- Enhancing our knowledge about consumer attitudes, knowledge and behaviours
- Exploring the role and value of food checklists in an overall monitoring system

In addition, getting new, more ambitious commitments from industry may become more challenging.

Discussion

It would also be useful to model the economic impact of salt reduction efforts, both the costs involved and the economic benefits.

Salt reduction is an entry point for wider reformulation and it would be interesting to set some very specific targets and drive forward real reformulation at the global and regional levels, particularly in countries where progress is lacking. There is recognition of the different strategies needed for negotiating with individual companies of different sizes and with industry bodies.

Workshop discussions

Three workshop discussions were organised around three questions using a world café format, whereby groups rotate and all three groups consider all three questions and add to the flipchart notes. A rapporteur provided brief feedback on each of the issues and this was followed by plenary discussion.

Regulation of salt reduction—Use and significance? How to regulate?

It will be very difficult to reach the target without some kind of regulation. One advantage of the regulatory approach is creation of a level playing field, which is a fair operating environment for companies.

Whichever approach is adopted it is important to adopt a programme and to give companies time to adjust and make changes. Regulation of substitutes is also an important issue. Use of salt substitutes does not result in changing tastes and increasing preferences for lower salt foods, and whenever replacements are used there should be a firm technological need to replace rather than reduce. The much higher cost of substitutes may play a role in regulating their use.

It is important to prioritise foods for reformulation based on food consumption data (kind of food, sales volumes, public health implications). There is a clear need to better articulate the potential benefits of taxing high salt foods. There is also a need to follow up on the use of a nutrient profile model to regulate health and nutrition claims. Nutrition labelling schemes (logos, warning labels, etc.) may also be useful to drive reformulation.

In terms of creation of a level playing field at the global and regional levels, it may be possible to address this issue through international trade policy. The Pacific islands group has also raised this issue at Codex, highlighting concerns that some food standards still permit high salt levels. WHO continues to highlight issues relating to NCDs and obesity in discussions on Codex guidelines and standard development. ESAN members are encouraged to discuss these issues with their colleagues who participate in Codex discussions. There was a reminder, however, that some of the main sources of salt (e.g., bread) are usually domestically produced and are not always traded internationally.

Although most European countries have pursued a voluntary approach, some EU countries do have mandatory levels for salts in certain foods and there was discussion of the implications for EU Member States of introducing national mandatory limits. There was clarification that it is not necessarily impossible for Member States to introduce national mandatory limits on salt but governments will need to prepare a robust justification on public health grounds and be able to demonstrate that the measure is not motivated by protectionism. ESAN membership, of course, extends outside the EU and these countries have free recourse to regulation. Five countries in the Eurasian Economic Union, for example, are introducing a trans fat ban from January 2018. Public health advocates have a role to play in supporting governments in these actions.

There is a clear need to involve legal expertise in discussions on regulatory measures at both national and European levels. Monitoring is an ongoing challenge, especially in the artisanal sector where the number of producers, and inspections are costly.

Intermediate goals to reach 5 g/day – Use and significance? Which goals?

The workshop discussions concluded in favour of intermediate goals, particularly since there need to be gradual reductions in salt levels in food and the 5 g/day goal is a maximum level for individuals.

In plenary discussion, however, it was suggested that modelling work indicates that there is not enough time to set intermediate goals at the population level if the global targets are to be met. Intermediate goals could, therefore, be more focused on process. Experience in Switzerland with an intermediate goal of 8 g per day, highlighted that interim goals can be difficult to communicate clearly and have some potential to create confusion. On the other hand, interim goals may be useful for enabling more acceptable and realistic communication messages that, in turn, engender support for reducing salt levels in processed foods. Messages about the long-term goals, conversely, may seem over-ambitious and, therefore, have a demotivating effect.

In addition, goals need to be country-specific in order to be realistic and achievable within the relevant policy time-frame. There was discussion of whether the intermediate goals should be sex-specific, given that men consume more salt than women. It was agreed that gender-specific targets may be logical, but this can be challenging for monitoring. Currently, the data are not generally available to be able to disaggregate the data for gender-specific analyses. Furthermore, in practical terms, to meet the global target for reductions in intakes, salt levels need to reduce far enough to be able to meet the targets in men. There is a need to ensure that the educational approaches are effective across genders.

The goals could be defined to take into account the distribution of intakes, to reflect a narrowing of the distribution for the same average intake. There was also some discussion about whether

setting an average population goal of 5 g per day could potentially mean that some individuals, at the lower end of the distribution, consume too little sodium and monitoring may need to take this into account.

Goals should be set for intake and for food groups. Further discussion is needed on the appropriate categories of food groups for salt targets.

It was suggested that educational work with student chefs and catering students could play a role in bringing about salt reductions. Educational efforts also need to be effective across socioeconomic groups—socioeconomic differences in salt consumption are persistent and this can include considerable differences in discretionary salt use in the home. This is another reason why progressive salt reductions in processed foods are important, because of the impact on the population's 'palate' and taste preferences. Industry may have information on different populations' preferences for saltiness, and it would be extremely valuable to have access to such information. There is, in general, a need for international framework for sharing data and information.

In relation to narrowing the distribution of salt intakes, this has been achieved in Ireland in relation to the distribution of salt *levels* by targeting engagement from the companies with the saltiest products.

Monitoring (composition of food, evaluation of targets) – Use and significance? What methods?

It was agreed that monitoring is very important for driving forward and measuring progress ('what gets measured is what gets done'). The gold standard should be 24-hour urinary sodium excretion studies, combined with nutrition surveys, industry information and label data.

There is a need for harmonization across countries, with agreement on the minimum requirements, data sets and time intervals. Harmonised monitoring systems across Europe would be very valuable for highlighting where there are large differences in salt levels within food product categories or sub-categories and then using such data to more effectively advocate for greater changes by food producers. This could help to foster healthy competition within and across countries.

It is for Member States to establish and support a harmonized system but WHO is very supportive of the concept and may be able to provide some preliminary support in the initial stages. Sharing of best practices is essential and tools to facilitate such sharing between countries are needed. Following the work of the network's working group on monitoring salt in bread, there is already a monitoring tool available which could easily be adapted to other products. The ESAN Secretariat (Switzerland) is willing to do some work to revitalize this area of work and, particularly, to adapt the tool for meat products. It will also require some input from Member States and the challenge remains the long-term maintenance of such databases.

There was clarification about how such monitoring tools differ from food composition databases. Food composition databases are mostly based on average figures based on a limited range of products and do not reflect either the full range of products with varied composition or product changes over relatively short-periods of time. In addition, they are very expensive and the same challenges associated with long-term maintenance apply—many countries already struggle to maintain up-to-date food composition databases and this is a major challenge. The development

of more targeted monitoring tools for salt levels in particular foods has, therefore, important potential to fill that particular gap in relation to this important area of policy.

Access to European databases (e.g., Mintel) across Europe would be very helpful to get information on sales, label data and reformulation. The Collaborating Centre at RIVM in the Netherlands has some crude data from analysis of salt and sugar levels in several food groups using the EUROFIR database, and may be able to share that data with ESAN. Another approach is to do regular shop surveys. The Collaborating Centre at the George Institute has a protocol for doing regular shop surveys in particular product categories over time, and this can be done using the Food Switch app to generate some useful data. There was discussion about how Member States might be able to tap into GS1 barcode data, which exists across countries, or to access other commercial data without entailing exorbitant costs.

The JANPA final conference in Paris in November 2017 will report results on comparison of monitoring data across European countries.

There is a need for risk-benefit assessments, strict monitoring of the use of sodium replacements and monitoring of the impact of salt reduction on real life experiences.

In conclusion, information is an essential weapon for ESAN and having more information available will improve the network's discussions and sharpen advocacy arguments, as well as providing a solid basis for regulatory action. Accessing such information, however, remains time-consuming and/or expensive. It was agreed that, it could be useful for most countries to set intermediate targets to shape standards for industry and to communicate to consumers.

Conclusions, next steps, next host country

On behalf of the ESAN Secretariat, Michael Beer made some concluding remarks. The information presented and the discussions that followed have provided helpful pointers for Member States' ongoing work in this area. In addition, some suggestions that warrant further exploration over the coming year and at the next meeting emerged:

- Collection of monitoring data on specific food product categories across the Region
- Identifying new ways to exchange data and information on best practice

Further suggestions of topics that it would be interesting to include in the next meeting are very welcome. He thanked the hosts and all participants for the lively discussion and thoughtful contributions. The presentations will be accessible on the ESAN extranet (with confidential, unpublished data redacted).

On behalf of WHO, João Breda commended the lasting commitment of Member States to push forward progress in this area, and to build this network. Achievement of the further progress that is needed will require outside-the-box thinking and adoption of some novel strategies. For this reason, there remains a strong role for the network to facilitate learning and exchange.

The findings and experience of this network will feed into the global discussions on progress towards the NCD targets and the Sustainable Development Goals in September 2018 through presentation to the European Regional meeting of NCD Directors in Moscow in June 2017. In addition, this action network model is under consideration at the global level to help facilitate progress on priority issues. One potential topic is portion size control and Member States were

asked to notify Chizuru Nishida, at WHO headquarters, if they are interested in participating in such an action network and willing to share their experiences in this area.

João Breda added his thanks to the host country, the organising team and the Swiss Secretariat for their ongoing leadership of the network and drew the meeting to a close.

Annex 1

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