SALT – A Public Health Issue

A Position Paper to HSE

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Executive Summary

Salt, an essential nutrient was only added to food 5,000 years ago. Now our consumption is 20-30 times greater than 5,000 years ago. Salt has been used for food preservation, and for adding flavour and texture to foods. Now, with modern technology and alternatives to salt as a preservative (chilling, refrigeration etc.) salt should play a lesser role in the modern diet.

There is a growing body of evidence of the adverse health effects of some of the foods that we eat. This literature is particularly robust for the association of excess salt consumption and hypertension. This has been borne out in a variety of study types in different populations.

Hypertension (raised blood pressure) is a major contributing factor to heart disease and stroke which together account for almost four out of ten deaths in Ireland. It is estimated that if we reduced our intake of salt as a population by 40% this would result in a reduction in 494 (13%) fewer deaths from stroke and 846 (10%) fewer deaths from heart disease on the island of Ireland.

We eat 10 g salt/day but we only need 4 g/day for physiological function. Only 20% of this salt is discretionary. So, given that 80% of our salt intake is obligatory, added to food during processing, preparation or preservation, we are reliant on 'upstream measures' such as healthy policies of procurement etc and engaging with the food industry to reduce salt intake.

The Health Services Executive (HSE), as part of its procurement policy recognises that it must offer value for money- not only in terms of lower cost but quality goods and services for both patients and staff alike. Engagement, through procurement, with the major suppliers of bread, cereals, meat and other processed foods to reduce salt content could favourably affect health of patients and staff alike. Such use of procurement has achieved 10% lower salt bread in the former HSE – Eastern region – a matter of 500,000 loaves eaten by patients and staff each year.

Consequently, we recommend that there is a need to raise the issue of salt reduction in food for patients and staff with the CEO, Prof B Drumm so as to establish a healthy food procurement policy within the HSE. The HSE would then be in a position to influence the larger public sector to adopt similar purchasing policies for the benefit of staff and clients with an even wider benefit to the population at large as a result of the influence on the retail environment.

1. Introduction

The reformed health service offers an important opportunity to review and improve how health can be advanced through the delivery of high quality health services as well as influencing determinants of health beyond the health services. One such area is that of food procurement for patients and staff in the health services. It is essential that food available in health sector establishments is healthy i.e. food is low in salt, saturated fat and sugar, high in fruit, vegetables and fibre and that healthy choice is actively promoted.

This paper proposes to set out the evidence for salt reduction in improving health and the role of the Health Services Executive (HSE) in the procurement of food low in salt as an important step in strategic planning of healthy food procurement. It is also important to acknowledge that this proposal builds on the excellent work in the former Health Board by procurement officers and their advisers, most often the catering officers.

2 The purpose of this proposal

The purpose of this proposal is as follows:

- To outline the compelling evidence of the adverse health effects of excess salt intake.
- To identify the role of the Health Sector in the salt reduction (advocacy, health promotion, healthy procurement).
- To raise awareness among senior management and especially procurement staff of the need to use the procurement process to improve health.
- To target the procurement of reduced salt foods for patients and staff in the HSE as a first step in healthy procurement.
- To collaborate with other public sector organisations so as to build a purchaser base in order to influence the food industry and so contribute to reduction in population exposure to dietary salt.

3. Why salt and why now?

The issue of salt and health has been addressed at national level in many countries. In 1994 in the UK, the Committee on Medical Aspects on Food and Nutrition in a review of the nutritional aspects of cardiovascular disease made a recommendation to reduce dietary salt intake from 9g/day to 6g/day (COMA, 1994). In 2003, in the UK, the Scientific Advisory Committee on Nutrition (which replaced COMA) appraised the evidence since 1994, to assess whether the previous recommendations were valid, and found that the evidence was overwhelming in favour of salt reduction (SACN, 2003). This was further supported by the USA Institute of Medicine Report on "*Dietary Reference Intakes for water, potassium, sodium, chloride and sulphate"* (US IOM, 2004).

In 2005 the Scientific Committee and the Nutrition Subcommittee of the Food Safety Authority of Ireland, published its Document "***Salt and Health: Review of the Scientific Evidence and Recommendations for Public Policy in Ireland"*** (FSAI 2005)**.** This document reviewed the

growing body of evidence regarding the deleterious health effects of excess salt consumption.The FSAI has subsequently actively engaged with the food industry to seek voluntary, gradual and sustained reductions in salt in processed and prepared foods.

While salt is an essential nutrient and is present in plants and animal derived foods the average Irish adult consumes approximately 10g of salt per day which is more than twice that needed for physiological function (FSAI, 2005). Excess salt intake results in a rise in blood pressure and an increase in the number of cases and deaths from stroke and heart disease. The recommended dietary allowance (RDA) is 4g salt per day for adults. As an initial population measure, it has been recommended that a mean intake of 6g of salt be set as an initial achievable target (FSAI 2005)

In studying this excess in the Irish diet, it is clear that only 15-20% of salt in the dietary salt is discretionary being added in the cooking or at table. Consequently, the remaining 80% is ***obligatory*** being ***added*** to the food during processing, preparation or preservation.

Two food groups (bread and meat/fish which is processed or preserved) account for over 50% of salt intake from foods, with the remainder contributed by various other processed foods, including milk products, soups and sauces, spreading fats, biscuits/cakes/pastries/confectionery and breakfast cereals.

The public sector, by virtue of their purchasing power has a role to play in influencing the food industry to reduce the salt content of food purchased. Within the health sector, a move to national procurement must be used in the interests of patients and staff to ensure healthy eating options.

4. The role of salt in ill-health – the evidence

In general
Cardiovascular disease, including heart disease, stroke and related diseases is the single highest cause of death in Ireland, accounting for over two in five (approximately 41%) of all deaths. Dietary salt intake is an important causal factor in the rise in blood pressure with age and in the development of essential hypertension in industrialised countries such as Ireland. Further, there is evidence that high salt intake may be associated with other cardiovascular outcomes independent of hypertension such as left ventricular hypertrophy. High salt intake has been associated with the development of gastric cancer in Asian countries, and may predispose to osteoporosis through increased urinary calcium excretion.

Much information, multiple sources, causality
Data has been compiled from observational studies (ecological, cross sectional and migration studies), animal and genetic models, and in interventional studies in normotensive and hypertensive subjects. These studies support the criteria for causality - strength of relationship, dose response, reversibility, consistency etc. Meta-analysis of 17 studies, showed that a 5g/day reduction in salt intake is associated with a fall in blood pressure of 4.96/2.73 mmHg in hypertensives and 3.6/1.6mmHg in normotensives, supporting a population approach to salt reduction (Feng, MacGregor 2002).
The burden of hypertension in Ireland

While limited, data on the prevalence of hypertension in the Irish population shows:-

- **The Kilkenny Health Project** Surveys in 1985 and 1990 confirmed the association between hypertension and increasing age, male gender and lower social class. In the 1990 survey 20% of males and 18% of females aged 35 to 64 years, had a blood pressure reading >160/95 or were on treatment for hypertension (Shelley, 1996).

- The second national **Survey of Lifestyles, Attitudes and Nutrition**, in 2002, identified a self-reported prevalence of hypertension of 11.6% in males and 13.3% in females, aged 18 years and over (SLAN 2003). These results reflected a rise in prevalence from the 1998 SLAN study when a prevalence of hypertension of 9.5% in males and 13.1% in females was recorded.

- A study of 1,018 males and females aged 50-60, in **Cork and Kerry** revealed a prevalence of hypertension of 50% in males and 43.5% in females of whom only 38% were receiving treatment. (Creagh 2002)

5. Impact of salt reduction on health

It has been estimated that a reduction of salt intake to 6g per day, which is still more than that required for physiological needs, will result in a 13% reduction in mortality due to stroke and 10% in mortality due to heart disease. On an all Ireland basis, this would equate with 494 fewer deaths from stroke and 846 deaths from heart disease. A decreasing incidence, as well as deaths will reduce the burden on the health services for stroke rehabilitation and heart disease interventions. Access to cardiac services, angiography, angioplasty etc will be more readily available to those with other risk factors.

6. Trends in food consumption

Changes on dietary patterns and food consumption patterns are driven by increasing affluence, a perceived lack of time, an increase in convenience foods, an increasing tendency to eat out rather than prepare food at home, an increased globalisation of world trade and a demand for all year round supplies.

In Ireland there is a need to be proactive in establishing surveillance systems to monitor trends in food consumption that can relate to European and other systems. The Irish Universities Nutrition Alliance (IUNA, www.iuna.net) has conducted a number of national food consumption surveys. The North South Ireland Food Consumption Survey (2001) looked at adults 18-64 years and the National Children's Food Survey (2005) studied children 5-12 years. Data is currently being collected for teenagers aged 13-17 years. As an initial step, Ireland through University College, Cork is contributing to EuroFIR, a partnership of 40 universities, research institutes and small to medium size enterprises, across 21 countries whose challenge is to develop an integrated and comprehensive databank of food composition data for Europe.

Research in food consumption patterns requires funding. In the health sector there is a need to identify indicators of consumption that can be tracked by procurement or other measures. We need to develop systems to gather, collate, analyse, and disseminate this data, both to health

service management, procurement staff, the medical professional and also to patients, staff and clients combined with a programme to evaluate behavioural change.

7. Collaborators in the salt debate

Many Irish organisations have contributed to the salt debate, namely the FSAI, *Safe*food and the Irish Heart Foundation.

Prof Ivan Perry, Department of Epidemiology and Public Health, University College Cork has been a tireless advocate for reduction of salt in food in Ireland in the last two decades.

The Catering Management Association of Ireland and the wider food industry have engaged with the debate and have worked with the FSAI in particular.

The following gives a useful snapshot of the agencies and their work

- The **FSAI** had engaged with food manufactures in the food groups that contribute most salt to the diet to secure voluntary gradual and sustained reductions in the salt content of their food. The FSAI has given a commitment to work with other State bodies whose role it is to increase consumer understanding of the salt and health issue and bring about behavioural change in consumers.

- ***Safe*food**, the Food Safety Promotion Board in May 2005, launched a campaign outlining the need to reduce salt intake, *"**How much salt is good for you**?"* This campaign aimed at members of the public outlined the RDA for salt, guidance regarding high salt foods and advice on how to reduce salt intake.

  *Safe*food have also collaborated with the and the Irish Heart Foundation in producing an information booklet on salt entitled *"**Time to cut down on SALT- information on reducing salt for a healthy heart"***

  Safetrak, consumer tracking research, commissioned by ***Safe*food**, also contributes to knowledge, behaviour and attitude to salt as well as other aspects of food consumption.

  In 2006, *Safe*food launched '*Ready Salted – Six Weeks to Change Your Tastebuds*' which was primarily aimed at employees and caterers in the workplace setting (*Safe*food, 2006). A direct mail invitation was sent to workplaces nationwide. The campaign ran for six weeks during which registered companies displayed information materials including posters, tray-liners and table tent cards

- **The Irish Heart Foundation** has had a number of initiatives aimed at salt awareness : - produced a position paper on the role of salt in hypertension, produced information leaflets for the public as part of the first national awareness campaign on salt (2004), engaged with food retailers and manufacturers, the statutory sector and academia in a breakfast forum and a caterer workshop as part of Irish Heart Week.

- **The Public Analyst** laboratories have a statutory role in testing food for compliance with relevant legislation and guidelines. The laboratories have a service contract with the FSAI

and the HSE to provide an analytic service for food samples collected by Environmental Health Officers from retailers around the country.

- **The Catering Management Association of Ireland** has undertaken a programme of awareness raising, promotion of alternatives to salt in cooking and engaged with Unilever to progress supply of low salt bouillon among other initiatives.

- The **food industry** has addressed the voluntary agreements with FSAI achieving reductions, for example in bread, soda bread, cereals and processed meats to date with some manufacturers targeting challenging areas such as cheese, yellow fat spreads and biscuits.

Other collaborators/supporters in the salt issue should be identified. These may include academic and scientific bodies, members of the various government departments including health, enterprise and employment and environment and consumers.

8. Procurement in the HSE

In 2006, a document outlining procurement policy was launched by the HSE (HSE, 2006). It outlined the responsibilities in spending in the health sector in terms of both cost and quality and the use of purchasing power in the health sector to streamline processes and make budgets go further.

Using purchasing power to contract for healthier food in the health sector has occurred in the past. For example, in the former HSE Eastern region there has been a decrease in purchase of frozen foods and red meat with an increase in purchase of fruit, vegetables and fish and chicken in recent years (Personal Communication, HSE Procurement officer). This is an observation by procurement officers who engage regularly with catering officers, and warehouse and distribution officers regarding types of produce needed, tendering process and contracts to approximately 80 sites (hospitals, health board nursing homes etc).

While this is an important trend it is not a systematic approach to using procurement for health. A second example illustrates a more active approach.

Example

In May 2005, in the former HSE –Eastern Region a contract for healthier bread was put in place by the then procurement section (John Swords and Joe Redmond). Following a tendering process bread with a 10% reduction in salt content was purchased The contract ensured that bread (white and brown loaves) supplied to the health sector should have a salt content of no greater than 1.14g/100g of the end product consumed. This equates to salt reduction in 500,000 pans purchased and consumed across 80 sites per annum.

The move to national procurement procedures under the new HSE offers the opportunity to take a systematic approach as outlined above. The following measures should be actively pursued

- Extend the procurement model, adapted by the former HSE Eastern Region, in contracting for bread nationally.
- Determine that other contracts adapt this approach in regard to soups, sauces, processed meat etc. This in turn would complement the voluntary agreement reached between the FSAI and the food industry.
- Collect information on food stuffs purchased which provide information and facilitate the monitoring of food trends in the health sector.

9. Recommendations

This paper outlines the medical evidence of the harmful effects of excess salt consumption. It identifies that the HSE, through its procurement policy, can contribute to healthier food for patients and staff. To achieve this the following recommendations are made:-

a. **Raise awareness and pursue a healthy procurement policy within the HSE, starting with salt** The need to reduce salt in the diet of patients and staff and the ability of the HSE to actively achieve salt reduction in this population (as well as other health goals) through a healthy procurement policy must be emphasised to the CEO, Professor Drumm and his management team.

b. **Pursue healthy food procurement actively in HSE starting with salt** Build on the achievement of procurement of bread 10% lower salt in the Eastern region by expanding this to the whole HSE environment. Then move on to contracting for reduced salt in other foods such as cured and processed meats, sauces and soups.

c. **Monitoring of food consumption trends** As part of healthy procurement the monitoring of food consumption should be enhanced to provide surveillance on achievement of wider goals.

d. **Match the procurement policy with a health promotion drive** Add value to the messages from *Safefood* and the Irish Heart Foundation by targeting reduction in added table salt in the HSE workplace

e. **Influence the wider public sector** Having put its house in order, the HSE should influence other public sector organisations to adopt a similar purchasing position for their staff and clients.

f. **Professional awareness and advocacy** Awareness of the salt issue needs to be raised amongst the Specialty of Public Health Medicine, the wider medical and allied professions as well as academic bodies who can act as advocates in this debate.

g. **Research** The HSE should engage with the FSAI and others in determining its contribution to research into food consumption, food manufacture (such as how to achieve a further 10% salt reduction in bread without detrimental effects).

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