Exploring the option of introducing a Food Traffic Light System into HSE Sites

Catherine Cosgrove
Joan Crawford
Heather Hegarty
Agatha Lawless

Report prepared for the Health & Wellbeing RCSI Leadership Development Programme September 2017
Some More Go – Exploring the option of introducing a Food Traffic Light System into HSE Sites

Team

Catherine Cosgrove
Regional Chief Environmental Health Officer
HSE-South
Health & Wellbeing Division

Joan Crawford
Senior Health Promotion Officer - Schools Team
Regional Lead for HPS HSE DML
Health & Wellbeing Division

Heather Hegarty
Senior Public Health Research Officer
HSE-South
Health & Wellbeing Division

Agatha Lawless
Project Manager: Healthy Eating & Active Living Programme
HSE-South East
Health and Wellbeing Division

1 Image: https://ediblematters.files.wordpress.com/2013/07/00400254.jpg
Some More Go – Exploring the option of introducing a Food Traffic Light System into HSE Sites

Table of Contents

Introduction
\hspace{1cm} Context........................................................................................................................................5
\hspace{1cm} Food Labelling
\hspace{1cm} Aims & Objectives

Methodology

Legal requirements & HSE policy
\hspace{1cm} Legal requirements that apply to food labelling in Ireland..................................................7
\hspace{1cm} Food Information for Consumer (FIC) Labelling
\hspace{1cm} Availability and Placement of Mandatory Food Information
\hspace{1cm} Mandatory Information – pre-packed food (packaged food)
\hspace{1cm} Mandatory Information – non pre-packed food (loose food)
\hspace{1cm} Mandatory Information - Nutritional
\hspace{1cm} Repeating Nutrition Information on the Front of Pack (FoP)
\hspace{1cm} Presentation of Nutrition Information
\hspace{1cm} Calculation of Nutrient Values
\hspace{1cm} HSE policy.....................................................................................................................................11
\hspace{1cm} Calorie Posting

Food Nutrition Label Formats
\hspace{1cm} Types of FoP Nutrition Label Formats.........................................................................................12

Existing Food Traffic Light Systems – Packaged Foods ........................................................................14
\hspace{1cm} The United Kingdom
\hspace{1cm} Scotland
\hspace{1cm} Safefood
\hspace{1cm} Ireland

Application of Traffic Light Systems - Loose Food .................................................................................17
\hspace{1cm} Food Traffic Light Systems - Loose Food
\hspace{1cm} Northern Ireland
\hspace{1cm} Ireland
\hspace{1cm} Aramark
\hspace{1cm} Food Choice at Work

Nutritional Software Packages

Traffic Light Systems in use in HSE catering facilities in Ireland

Site 1 - St Columbanus Hospital, Killarney...............................................................................................23
\hspace{1cm} System used
\hspace{1cm} Learning

Site 2 – St Camillus Hospital, Limerick.....................................................................................................27
\hspace{1cm} System used
\hspace{1cm} Learning
Some More Go – Exploring the option of introducing a Food Traffic Light System into HSE Sites

Discussion and Conclusions

Discussion

Packaged food versus loose food.
Definition and understanding of TLS
Criteria in defining a TLS
Implementing a TLS in HSE sites

Conclusions

Recommendations

Acknowledgements

References
Introduction

Context
The Health Service Executive (HSE) is committed to maintaining and promoting the health of the whole population as part of its implementation of Healthy Ireland: A Framework for Improved Health and Wellbeing 2013-2025[1]. Dietary factors are the most important risk factors undermining health and wellbeing in every single country in the World Health Organisation European Region. Research shows that excess consumption of food high in fats, salt and sugar, as well as low levels of vegetables and fruit intake, play a significant role in increasing our risk of developing chronic diseases such as heart disease, type 2 diabetes and cancer[2].

In the past two decades, levels of overweight and obesity in Ireland have doubled[3]. Four out of five adults over the age of 50 years[4] and three out of five adults 18-64 years[5] are overweight or obese. Only 40% of Irish people now have a healthy weight. Solving the obesity epidemic and reducing the burden of chronic disease requires a comprehensive, integrated approach. Evidence shows that one of the key contributors to these two issues is the obesogenic environment in which we live which can make the unhealthy option (high fat, high salt, high sugar foods) the easier option leading to the consumption, in the home, the workplace and when eating out, of excess calories from highly processed food[6].

There is broad consensus among academics, government departments, legislators and consumer protection activists that, on a European as well as national level, action must be taken to combat overweight and obesity issues. In addition to encouraging physical activity, education on nutrition and healthy eating is also regarded necessary to increase consumer information on and knowledge of nutrients and recommended daily intakes. As a result, both the European Union and many of its member states have made regulating the food industry in terms of rules for nutrition labelling one of their priorities[7].

Food labelling
The concept of nutrition (menu/food) labelling helps consumers make informed food choices by being provided with calorie and other nutrition information for their food. Legislation requires certain information to be provided on all foods with more specific requirements for packaged foods than loose foods. Increasingly, attempts across the world are being made to make this information more readily understood at the point of sale, ‘at a glance’.

Currently, there is no consensus as to the best way that this ‘at a glance’ nutrition information may be shown and consequently a wide variety of label formats are proposed or in use around the world. Calorie posting is an example of menu labelling where calories are displayed on menus/foods. Research in US shows that, when calories are on the menu beside the price, people eat 6% less calories overall each day[8]. The HSE Calorie Posting Policy [6] was introduced in the HSE in 2015 and is in the process of being fully implemented.

Another type of label format is Traffic Light Labelling (TLL) or Traffic Light Systems (TLS)². TLS is a method of food labelling aimed at simplifying nutrition information in order to help the consumer make an informed food choice ‘at a glance’. TLS colour codes four nutrients – fats, saturated fats, sugar and salt – so that it is readily apparent if there are high (red), medium (amber) or low (green) levels of that nutrient contained in 100g of that food.

² Please note that both are abbreviated to TLS for the remainder of this document.
Red means that the food or drink is high in this nutrient and we should try to have these foods less often or eat them in small amounts.

Amber means the food isn’t high or low in the nutrient, so this is an acceptable choice most of the time.

Green means the food is low in that nutrient. The more green lights, the healthier the choice.

A consultation conducted by the Faculty of Public Health in the UK cited a recent systematic review which concluded that out of all the Front of Pack (FOP) labels studied, the traffic light labelling system was the most liked and readily understood by consumers[9, 10].

**Aims & Objectives**

Building on calorie posting, it has been proposed that TLS should be introduced in HSE staff sites. This project report aims to explore the factors to be considered when introducing a TLS in HSE sites.

The objectives of the report are to:
- Identify the legal requirements that apply to food labelling in Ireland.
- Provide a description of a Traffic Light System (and variations of TLS) in relation to food labelling.
- Highlight work being done in Ireland in relation to providing consumers with nutritional information on food. The work described is carried out by the HSE and other national stakeholders that promote healthy eating as part of their work.
- Consider the factors needed to introduce a Traffic Light System in a site that has implemented the HSE Calorie Posting Policy and make recommendations for next steps.

**Methodology**

This paper was researched by conducting a review of literature concerning the use of Food Traffic Light Labelling Systems in Ireland and other countries, particularly to determine what TLS have been applied to the serving of loose foods. We spoke with internal stakeholders in the HSE and external stakeholders including voluntary agencies and private companies. Some stakeholders were either unclear on what was meant by TLS or had varying interpretations of it so we also researched the legislative requirements around food labelling. We contacted sites where either calorie posting and/or TLS are in operation.
Legal requirements & HSE policy

This section provides an overview of current legislation and policy concerning the promotion of the health and wellbeing of the people in Ireland in relation to food labelling.

**Legal requirements that apply to food labelling in Ireland**

Legislation requires a considerable amount of information about the nutrient content of food to be included on a packaged food item, however the amount and type of information required on loose foods differs. The intention of all labelling is to facilitate the consumer to make an informed food choice. The following information is from the Food Safety Authority Ireland website[11].

*Food Information for Consumer (FIC) Labelling*

On the 13 December 2014, new rules on the provision of food information to the consumer (FIC) became applicable (Regulation (EU) No 1169/2011). These rules replaced the previous rules on food labelling which were first introduced in 1979 and the nutrition labelling rules which were adopted in 1990.

This new Regulation establishes the general principles, requirements and responsibilities governing food information and in particular food labelling. Food Information is defined as “information concerning a food and made available to the final consumer by means of a label, other accompanying material, or any other means including modern technology tools or verbal communication”.

The Regulation applies to food business operators at all stages of the food chain, where their activities concern the provision of food information to consumers. It applies to all foods intended for the final consumer, including foods delivered by mass caterers, and foods intended for supply to mass caterers.

This regulation applies to pre-packed and non pre-packed food. Pre-packed foods are defined in legislation as: “any single item for presentation as such to the final consumer and to mass caterers, consisting of a food and the packaging into which it was put before being offered for sale, whether such packaging encloses the food completely or only partially, but in any event in such a way that the contents cannot be altered without opening or changing the packaging”. ‘Non pre-packed food’ are foods sold without packaging, foods packed on the sales premises at the consumer’s request or foods pre-packed for direct sale.

Food information must be accurate, clear and easy to understand for the consumer, it must not be misleading particularly:

a) As to the characteristics of the food and, in particular, as to its nature, identity, properties, composition, quantity, durability, country of origin or place of provenance, method of manufacture or production;

b) By attributing to the food, effects or properties which it does not possess;

c) By suggesting that the food possesses special characteristics when in fact, all similar foods possess such characteristics, in particular by specifically emphasising the presence or absence of certain ingredients and/or nutrients;

d) By suggesting, by means of the appearance, the description or pictorial representations, the presence of a particular food or an ingredient, while in reality a component naturally present or an ingredient normally used in that food has been substituted with a different component or a different ingredient.
Some More Go – Exploring the option of introducing a Food Traffic Light System into HSE Sites

Availability and Placement of Mandatory Food Information
In the case of pre-packed foods, mandatory food information must appear directly on the package or on a label attached to the packaging. The information must be in a conspicuous place in such a way as to be easily visible, clearly legible and, where appropriate, indelible. It must not in any way be hidden, obscured, detracted from or interrupted by any other written or pictorial matter or any other intervening material. Voluntary information must not be displayed to the detriment of the space available for mandatory food information.

Mandatory Information – pre-packed food (packaged food)
The following mandatory information must appear on the label of a pre-packed food:

(a) the name of the food*
(b) the list of ingredients
(c) any ingredient or processing aid listed in Annex II to FIC or derived from a substance or product listed in Annex II to FIC causing allergies or intolerances used in the manufacture or preparation of a food and still present in the finished product, even if in an altered form
(d) the quantity of certain ingredients or categories of ingredients
(e) the net quantity of the food*
(f) the date of minimum durability or the ‘use by’ date
(g) any special storage conditions and/or conditions of use
(h) the name or business name and address of the food business operator referred to in Article 8(1) of FIC
(i) the country of origin or place of provenance where its absence may mislead the consumer as to the true origin or provenance of the food or where country of origin is specifically required under legislation
(j) instructions for use where it would be difficult to make appropriate use of the food in the absence of such instructions
(k) with respect to beverages containing more than 1.2 % by volume of alcohol, the actual alcoholic strength by volume*
(l) a nutrition declaration ( mandatory since 13 December 2016)

*must appear in the same field of vision

Mandatory Information – non pre-packed food (loose food)
Of the above mandatory list, foods which are non pre-packed foods must provide allergen information ((c) above). Other indications from this list can be provided on a voluntary basis, however if a food business operator provides any information on a voluntary basis, the requirements set out in FIC must be followed.

Mandatory Information - Nutritional
When providing nutrition information FIC requires that the declaration consists of:

(a) The energy value and
(b) The amounts of fat, saturates, carbohydrate, sugars, protein and salt

The content of the mandatory nutrition declaration may be supplemented with an indication of the amounts of one or more of the following:

(a) Monounsaturates
(b) Polyunsaturates
(c) Polyols
(d) Starch
(e) Fibre
(f) Any of the vitamins or minerals listed in point 1 of Part A of Annex XIII to FIC, and present in significant amounts as defined in point 2 of Part A of Annex XIII to FIC

Once the mandatory and the supplementary nutrients are declared, no other nutrient can be added to the nutrition declaration as it is a ‘closed list’. Where another nutrient, not on this list, must be declared on the label, as a result of a requirement of the nutrition or health claims legislation (Regulation (EU) No. 1924/2006), the nutrient must be declared below, but not in, the nutrition table.

**Repeating Nutrition Information on the Front of Pack (FoP)**

Where the mandatory nutrition information is declared on the label, certain nutrients may be repeated in the ‘principal field of vision’, i.e. the front of pack. This repeated information is a voluntary measure but where a food business chooses to provide this additional declaration, only the following information can be provided:

Energy only or
Energy along with fat, saturates, sugar and salt.

This repeated information may be provided:
Per 100g/ml only
Per 100g/ml and per portion or
On a per portion basis only.

When providing this ‘Front of Pack’ information energy must always be indicated per 100g/ml as a minimum.

**Presentation of Nutrition Information**

Nutrition information must be presented in tabular format with the numbers aligned. Where space does not permit, the declaration may appear in linear format. The energy value must be expressed in Kilo Joules (kJ) and Kilo Calories (kcal) and the amount of the nutrients must be expressed in grams (g).

All elements of the nutrition declaration must be included in the same field of vision. They must be presented together in a clear format and, where appropriate, in the order of presentation provided for in Annex XV to FIC.

The nutrition declaration must be expressed per 100 g/ml, using the measurement units specified in Annex XV to FIC. When provided, the declaration on vitamins and minerals must in addition to this form of expression, be expressed as a percentage of the reference intakes set out in point 1 of Part A of Annex XIII to FIC in relation to per 100 g or per 100 ml.

**Calculation of Nutrient Values**

The legislation allows for various methods of calculating the nutrient values. It does not necessarily require laboratory analysis and it may be possible for a food business operator to calculate the values themselves depending on the type of product. The declared values in the nutrition table are average values* and must be based on:

The manufacturer's analysis of the food
A calculation from the known or actual average values of the ingredients used; or
A calculation from generally established and accepted data

*The nutrient values are average values to take into account the natural variation in foodstuffs due to, for example, seasonality or supplier differences. However, there is EU guidance on the permitted tolerances for nutrient values which should be consulted. The nutrient values must be for the food as sold. However, where appropriate the information may relate to the food after preparation, provided that sufficiently detailed preparation instructions are given and the information relates to the food as prepared for consumption.

Most of the regulations apply to packaged foods. To this end, the application of a food labelling system such as TLS presents challenges when introducing such a system to loose foods across a number of sites and facilities. Diagram 1, illustrates the legislative requirements for packaged foods and loose foods.

*Diagram 1* was devised by report authors to illustrate the legislative position.
Some More Go – Exploring the option of introducing a Food Traffic Light System into HSE Sites

**HSE policy**

The HSE has a specific role and purpose as the main provider and guardian of health and social care in Ireland. It has a fundamental responsibility for the delivery of the Healthy Ireland Framework described below within its own population and to the population it serves. To this end the HSE has developed policies and plans described here to help improve the health and wellbeing of the population. Although a TLS is not named in a specific policy, ways of promoting healthier lifestyle choices and facilitating better health and wellbeing are. Improving consumer food choice information in terms of calorie posting is supported by the implementation of the HSE Calorie Posting Policy. A TLS is aimed to build on the work of calorie posting.

**HSE's Corporate Plan 2015-2017**[12] - The first goal in the Corporate Plan states that the HSE will promote health and wellbeing as part of everything we do so that people will be healthier.

**Healthy Ireland - A Framework for Improved Health and Wellbeing 2013-2025[1]** - The Healthy Ireland (HI) Framework was adopted by the Irish Government in 2013 in response to Ireland’s changing health and wellbeing profile. It envisions a Healthy Ireland; where everyone can enjoy physical and mental health and wellbeing to their full potential; where wellbeing is valued and supported at every level of society and is everyone’s responsibility.

**Healthy Ireland in the Health Services National Implementation Plan 2015-2017[13]**. This is the first Implementation Plan for Healthy Ireland in the Health Services and it has three strategic priorities;

- reducing the burden of chronic disease,
- ensuring we have a resilient and healthy workforce
- delivering significant health service reforms.

Action 62 is concerned with implementing the HSE Tobacco Free Campus Policy, Healthy Food and Nutrition Policy, Calorie Posting Policy and Healthy Vending Policy in all settings.

**The HSE Calorie Posting Policy**[14] was prepared in response to Goal 4 of the Healthy Ireland Framework[1] “Create an environment where every individual and sector of society can play their part in achieving a healthy Ireland”. The Calorie Posting Policy refers to calorie posting only and not to a Traffic Light System. However, this policy is reviewed every two years so if necessary TLS could be written in to it if the HSE plans to implement a TLS.

**Implementing the HSE Policy on Calorie Posting in staff canteens with external catering provider (Masters Thesis)[15]** makes reference to traffic light system (pg 25 citing Ellison 2014[16]) as being important in the context of how information is presented.

**Calorie Posting**

The purpose of the HSE policy on Calorie Posting is to promote awareness of healthier food and drink choices amongst HSE staff and the public using and visiting HSE healthcare facilities, by highlighting the calorie content of food and drinks provided in HSE facilities. The policy applies to all in-house catering and contracted catering and vending services throughout the HSE. The Policy does not apply to in-patient menus.

Calorie Posting commenced in two pilot sites in Letterkenny General and Cherry Orchard Hospitals in 2015 using Menucal which is a tool developed by the Public Health Nutrition (PHN) team at the FSAI to provide guidance to Catering Staff and assists them in calculating calories for the food they serve[17].
Some More Go – Exploring the option of introducing a Food Traffic Light System into HSE Sites

Calorie posting was also introduced in Dr. Steevens’ Hospital and University Hospital Galway by a contracted catering provider. This process is described by McCormack[15].

Health Promotion and Improvement carried out a recent review of Calorie Posting in the Acute Sector (personal communication from Sarah O’Brien, Lead for the HSE Healthy Eating & Active Living Programme). The review reported that 80% of hospitals have commenced calorie posting and 36% have complete menus posted. It also highlighted the extent to which catering staff indicated a need to include nutritional and calorific value of food such as that provided for by the Traffic Light System.

Food Nutrition Label Formats

The section on legislative requirements above indicates that there are a variety of different labelling formats. Legislatively, a table is required on the back of the pack to provide the list of mandatory information detailed above. Often some of this information is repeated on the front of the pack to help inform consumers. It is this front of pack labelling (FoP) that is of greatest significance to this report, not for the information it contains as such, but for the way that information is portrayed. The aim of this current report is to explore the factors to be considered when introducing a TLS in HSE facility. This is proposed in order to build on calorie posting, which is policy across HSE catering facilities.

In the course of researching this project two issues stood out – namely the need for a clear understanding of what is meant by a Traffic Light System for food, and secondly; its application in HSE catering facilities which is largely, although not exclusively, loose (or non pre-packed) food. This differs to the application of TLS on packaged foods. Calorie posting in HSE facilities is a form of food labelling applied to loose food.

In order to take any steps towards introducing a TLS in HSE facilities these issues must be delineated.

Types of FoP Nutrition Label Formats

As evidenced in Diagram 1 above, FoP nutrition labels are voluntary. Inevitably this leads to a variety of FoP label formats. Consumers pay attention to FoP labelling, to make health inferences from labels, by making simple calculations. However, deducing accurate inferences decreases as complexity increases, and confusion exists where multiple schemes co-exist on the market. Strong consumer preferences for a consistent single scheme have been found[18, 19].

These voluntary FoP label formats vary on a continuum from those that are purely fact based with no opinion or recommendation offered (e.g. Recommended Daily Intakes or RDA previously known as Guideline Daily Amounts GDA); to those at the other end of the spectrum that offer only an opinion, with no nutritional information (health logos such as the ‘Swedish Keyhole’). Fig. 1.
Calorie posting highlights the calorie content of food and drinks – either in catering facilities (loose food) or on packaged foods. It is a reductive label only, providing only the number of calories provided in a food.

The TLS is a hybrid label. The TLS is the most widely deployed label and contains varying proportions of nutritional information (e.g. percentage daily intake of fat) and opinion/recommendation (related TLS colour). Application of TLS varies between that applied for packaged foods and for meals (loose food) served for example in a canteen. Research has found that TLS is preferred and is effective [18].

A comparative study conducted on consumers’ understanding of various food labelling systems came to similar conclusions[10]. The study was commissioned by the governmental Food Standards Agency (FSA) of the UK. Researchers found the combination of traffic light colours and text is crucial to the consumer’s ability to understand nutritional information. According to the study, two systems of nutrition labelling are significantly easier to understand than other systems: a combination of text (high/medium/low) and traffic light colours (red/amber/green) or a combination of text, traffic light colours and additional GDA percentage values. Used alone, the food industry’s model with percentage values using the GDA system failed in the comparative study.

Although levels of comprehension are generally high for all FoP labels, the coexistence of a range of FoP label formats in the marketplace causes difficulties for shoppers. This suggests that standardising to just one label format would enhance use and comprehension of FoP labels. Overall the balance of evidence from the research shows that the strongest FoP labels are those which combine text (high, medium, low), traffic light colours and %GDA information[10].
**Existing Food Traffic Light Systems – Packaged Foods**

**The United Kingdom**

The food Traffic Light System in the UK for packaged foods (FoP) is based on providing separate information on fat, saturated fat, sugar and salt and uses nutritional criteria developed by the Food Safety Authority (FSA) to determine the colour code. The FSA developed its traffic light colour-coding on the basis of comprehensive scientific studies and consultations. In addition to its own research, the FSA factored in expert opinions from numerous consumer groups, food manufacturers and retailers. Strong representation, with support from the medical field was made to have this system adopted throughout the EU but strong pressure from industry meant that the decision to use a food TLS was voluntary in each country rather than mandatory.

TLS has been used on a voluntary basis by several manufacturers and food retailers in the UK for several years however the colour-coding criteria have been changed repeatedly since 2007 i.e. the traffic-light label that is being today is different from the original model.

The Food Safety Authority (FSA) produced a food shopping card which illustrates the nutritional criteria for each colour and nutrient[21]. Fig. 2

![Check how much fat, sugar and salt is in your food](image)

**Fig. 2. FSA UK Food Shopping Card**

However, this original food shopping card and FSA criteria have been revised[22, 23] (Fig.3). There are some different levels for medium and high fat, and sugars. (Both (2007 and 2016) were available for download on 04/05/2017).
Some More Go – Exploring the option of introducing a Food Traffic Light System into HSE Sites

![Image]

<table>
<thead>
<tr>
<th>Text</th>
<th>LOW&lt;sup&gt;*&lt;/sup&gt;</th>
<th>MEDIUM</th>
<th>HIGH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour code</td>
<td>Green</td>
<td>Amber</td>
<td>Red</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;25% of RIs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;30% of RIs</td>
</tr>
<tr>
<td>Fat</td>
<td>≤ 3.0g/100g</td>
<td>&gt; 3.0g to ≤ 17.5g/100g</td>
<td>&gt; 17.5g/100g</td>
</tr>
<tr>
<td>Saturates</td>
<td>≤ 1.5g/100g</td>
<td>&gt; 1.5g to ≤ 5.0g/100g</td>
<td>&gt; 5.0g/100g</td>
</tr>
<tr>
<td>(Total) Sugars</td>
<td>≤ 5.0g/100g</td>
<td>&gt; 5.0g to ≤ 22.5g/100g</td>
<td>&gt; 22.5g/100g</td>
</tr>
<tr>
<td>Salt</td>
<td>≤ 0.3g/100g</td>
<td>&gt; 0.3g to ≤ 1.5g/100g</td>
<td>&gt;1.5g/100g</td>
</tr>
</tbody>
</table>

Fig. 3 Revised FSA coding criteria

**Scotland**

Chest Heart and Stroke Scotland (CHSS)[24] have produced a TTS guidance, dated March 2016. The criteria on that breakdown is based on the revised Dept. of Health/FSA document (Fig. 3 above) but they choose to write the gram amounts in a slightly different way which serves to potentially add confusion, particularly when trying to convey the information ‘at a glance’. Fig. 4. For example, ≤3.0g to ≤17.5g on the FSA is written ‘between 3.1g and 17.5g’ on the CHSS label.

![CHSS Traffic Light Label]

CHSS also highlights an interesting dilemma for consumers. It advises consumers that although a “product provides you with 12% of your RI for sugar, but is also considered ‘red’ or high in sugar as per the ‘traffic light system’ – don’t confuse these two different tools”.

![Fat Saturates Sugar Salt]

Fig. 4 CHSS Traffic Light Label

Based on guidelines by the Department of Health, under the terms of the Open Government Licence.

![Fat Saturates Sugar Salt]

Fig. 4 CHSS Traffic Light Label

Based on guidelines by the Department of Health, under the terms of the Open Government Licence.
Some More Go – Exploring the option of introducing a Food Traffic Light System into HSE Sites

**Safefood**

Safefood is an all-island implementation body set up under the British-Irish Agreement with a general remit to promote awareness and knowledge of food safety and nutrition issues on the island of Ireland. Safefood uses the following traffic light label criteria (2015)[25]. The criteria is the same as the older FSA criteria. Fig. 5

<table>
<thead>
<tr>
<th>Criteria for 100g of food</th>
<th>LOW</th>
<th>MEDIUM</th>
<th>HIGH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Text</strong></td>
<td>Green</td>
<td>Amber</td>
<td>Red</td>
</tr>
<tr>
<td><strong>Colour code</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fat</td>
<td>≤3.0g/100g</td>
<td>&gt;3.0g to ≤20g/100g</td>
<td>&gt;20g/100g</td>
</tr>
<tr>
<td>Saturates</td>
<td>≤1.5g/100g</td>
<td>&gt;1.5g to ≤5.0g/100g</td>
<td>&gt;5.0g/100g</td>
</tr>
<tr>
<td>(Total) Sugars</td>
<td>≤5.0g/100g</td>
<td>&gt;5.0g and ≤15g/100g</td>
<td>&gt;15g/100g</td>
</tr>
<tr>
<td>Salt</td>
<td>≤0.3g/100g</td>
<td>&gt;0.3g to ≤1.5g/100g</td>
<td>&gt;1.5g/100g</td>
</tr>
</tbody>
</table>

Fig. 5

**Ireland**

**Irish Heart Foundation (IHF)**

Although TLS are not routinely in use in Ireland, the IHF [26, 27] also produced a Food Shopping Card to help consumers understand the information on food labels more easily. Its most recent version uses the same criteria as the revised UK FSA criteria chart Fig. 6. This is also used by Croí [28]. Fig. 7

---

**FOOD SHOPPING CARD**

Check how much fat, sugar and salt is in your food

<table>
<thead>
<tr>
<th>Sugars</th>
<th>Fat</th>
<th>Saturates</th>
<th>Salt</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGH</td>
<td>Over 22.5g</td>
<td>Over 17.5g</td>
<td>Over 5g</td>
</tr>
<tr>
<td>MED</td>
<td>Between 5g and 22.5g</td>
<td>Between 3g and 17.5g</td>
<td>Between 1.5g and 5g</td>
</tr>
<tr>
<td>LOW</td>
<td>5g and below</td>
<td>3g and below</td>
<td>1.5g and below</td>
</tr>
</tbody>
</table>

The amount you eat of a particular food affects how much sugars, fat, saturates and salt you will get from it.

Fig. 6 IHF Food Shopping card

**Croí**

Croí is a not-for-profit foundation established in the West of Ireland in 1985 as a limited company dedicated to fighting heart disease and stroke in the region. Part of their work involves providing healthy lifestyle tips and advice from a dietary point of view. The Croí Healthy Shopping Card uses
Some More Go – Exploring the option of introducing a Food Traffic Light System into HSE Sites

the traffic light colours to help consumers make better food choices[28]. This card can help consumers get the balance right by helping them choose between products by comparing the fat, saturates, sugar and salt values. It is important that consumers look at the ‘per 100g’ column on the food label when using this card.

In 2012 Croí launched a user friendly app called Croi Foodwise which used a novel traffic light system to inform people on their food shopping choices. Users simply compare the information on the food label with the values assigned to the colours red (unhealthy choice), amber and green (healthy choice). The app is available to download on the Apple iOS system.

In discussing the relative merits of calorie information versus other types of informational approaches (e.g. traffic light schemes or full nutritional information), a tension between simplicity and immediacy of the information for ease of use, and comprehensiveness and

---

**Application of Traffic Light Systems for Loose Food**

TLS are available for packaged foods. The format may vary but generally follow the same principles and are readily implementable – the exact amounts of nutrients and the associated volumes are known in packaged foods. This is considerably more difficult for loose food. There are however some applications of TLS in use for loose foods served in catering facilities. They vary in format however from each other and from that outlined in the strict FoP criteria given above.

**Northern Ireland**

The Food Standards Agency in Northern Ireland ([https://www.food.gov.uk/northern-ireland/nutritionni](https://www.food.gov.uk/northern-ireland/nutritionni)) is responsible for policy on general food labelling, food standards and nutrition labelling. Caloriewise is a pilot of the display of calorie information in small-medium sized catering businesses in Northern Ireland at the point consumers choose what they want to eat[29]. The pilot explored the rationale and practical implications for food businesses and consumers’ understanding of calories.
accuracy of information to promote trust in the scheme, was identified. Simplicity was felt to be important to encourage widespread usage, however there were respondents who felt that oversimplification could sacrifice accuracy, for example where it was unclear what criteria traffic light codings were based on, which could potentially result in mistrust of the information. Similarly, there was divergence of opinion about whether information about calories alone was sufficient to assess the ‘healthiness’ of a product or whether additional information such as sugar, salt and fat content was also needed.

The Food Standards Agency is currently planning for a new Caloriewise scheme in Northern Ireland. This work follows on from the success of the Caloriewise pilot in 2012 and the subsequent evaluation.

Ireland

The Irish Heart Foundation (IHF) “Happy Heart at Work Healthy Eating Award” is based along similar principles to a TLS but isn’t actually traffic light colour coded [30]. Bronze is awarded to the eating establishment if set principles with attendant criteria are met which include low fat choices being offered, high fibre choices, more choices of fruit and vegetables, snacks and drinks with less sugar, lower salt options, attention to portion size. A silver award requires some additional criteria such as oily fish being offered at least twice a week, and that at least two days per week are chip-free. Gold must meet bronze and silver requirements with additional enhanced criteria. The IHF has revised its standards for their Happy Heart at Work Award to incorporate calorie posting as part of their Silver and Gold Awards which commenced in January 2016. A bronze award has no requirement for calorie posting. Silver is awarded if calories are displayed on the hot lunch menu and gold is awarded if calories are displayed on all menus.

The Food Safety Authority of Ireland (FSAI) has not issued a TLS or traffic light shopping card but has published a report “Scientific Recommendations for Healthy Eating Guidelines in Ireland” 2011[31].

In 2016, the Department of Health and the Health Service Executive published revised Healthy Eating Guidelines and a Food Pyramid toolkit. These revised guidelines were based on the above document, a review of the previous Healthy Eating Guidelines and the Healthy Ireland Survey results (2015, 2016).

Aramark

Aramark is a private catering supplier and they have used a traffic light labelling system determining the healthy and less healthy options on offer. Aramark’s Right Track Guidelines, based on the FSAI Healthy Eating Guidelines (2011), suggest that if they colour code a meal green then the consumer can ‘eat to their hearts content’, amber foods should be eaten in ‘moderation’ and red requires ‘thinking twice’. Green, amber and red are devised on the basis of both how the food is cooked, whether processed meats, or sauces, or salt are used; the proportion of wholegrains or fruits, fat content of the foods.  

This system has now largely been withdrawn from use by Aramark and has been replaced by their ‘healthy for life’ system which puts a focus on a different ‘Wellness Topic’ and foods each month. Their Right Track (traffic light system) was in use in St. Finbarr’s Hospital campus in Cork for example but was withdrawn in early 2017 Fig 8.

Some More Go – Exploring the option of introducing a Food Traffic Light System into HSE Sites

Food Choice at Work Ltd

Food Choice at Work Ltd (FCW) is a commercial spin-out company from University College Cork (UCC). Dr Fiona Geaney, under the supervision of Professor Ivan Perry, developed the programme during her doctoral training with the Department of Epidemiology and Public Health in UCC. The programme has been tested in leading multinational workplaces as a robust cluster controlled trial and has 12 peer-reviewed academic publications to date (2011–2017). Due to commercial interest and the significance of the trial findings, FCW was commercialised in 2015. FCW now operates a proven healthy eating management system for employees.

The programme operationalises healthy eating within workplaces and uses employee centric methods to improve employee health and provide a return on investment for employers by reducing
Some More Go – Exploring the option of introducing a Food Traffic Light System into HSE Sites

absenteeism. The approach integrates corporate catering providers, workplace stakeholders and employees and makes positive changes in how food in the workplace is purchased, prepared and presented. Key components of the approach include restructuring of workplace canteens, strategic positioning of healthier alternatives, menu modifications for healthier menus, portion size guidance, daily application of FCW calories and traffic light coding system, health and nutrition clinics and monthly nutrition information. FCW are currently developing a decision-making location specific software platform that will automate the programmes’ key processes.

**The Food Choice at Work Trial**
The Food Choice at Work study[32] was a cluster-controlled trial of complex workplace dietary interventions. The trial assessed the comparative effectiveness of a nutrition education intervention and a system-level environmental dietary modification intervention both alone in combination versus a control workplace. The trial was conducted in four large manufacturing workplaces in Cork for a period of 9 months. Workplaces were allocated to A, (Control), B, nutrition education alone (Education), C, system-level environmental dietary modification alone (Environment) and D, nutrition education and system-level environmental dietary modification (Combined). In the environment intervention, dietary modification elements were implemented which included, menu modifications (restriction of fat, sugar and salt), an increase in fibre, fruit and vegetables, price discounts on fresh fruit, strategic positioning of healthier alternatives and portion size control. The nutrition education intervention included, individual nutrition consultations, group presentations and detailed nutrition education (calorie and traffic-light menu labelling, posters, leaflets and emails). The combined intervention received all elements of the environment and nutrition education interventions. The results of the trial revealed that combining nutrition education and environmental dietary modification is an effective approach for promoting healthy eating at work. The FCW intervention is a sustainable cost-effective model and wide-scale implementation is underway at local and national workplaces.

**FCW Traffic Light Labelling**
FCW use a healthy eating traffic-light coding system. The coding system displays the number of calories and the traffic lights display the amounts of fat, saturated fat, total sugars and salt per portion size of the meal or food item. The traffic lights are displayed in words for employees that are colour blind. The traffic-light threshold values were based on the Irish nutrient goals from the Food Safety Authority of Ireland (FSAI) and the Food and Drug Administration labelling system. The Irish nutrient goals have been developed on the basis of a caloric intake of 2,000 kilocalorie (kcal) per day. The recommended percentage intake for the nutrients used by the Food Choice at Work Trial is as follows: for fat, 20% to 35% (<80g); for saturated fat, <10% (≤ 20g); for total sugar, ≤20% (≤ 90g); and for salt, ≤6g. A green light is applied if a food does not exceed 5% of the recommended percentage intake, amber between 5% and 20% and red if the food exceeds the limit of 20% of the recommended percentage intake. A figure of the food traffic light display is provided in Fig.9. This display is applied to all food items/meals that are on offer within a workplace, including open food. Traffic lights are displayed on monitor screens, on top of food counters and on vending machines. FCW have also recently developed shelf-edge labelling which displays calorie, traffic-light information and price on all food items that are stored in fridges and on shelves within workplaces. (Figure 10).
Some More Go – Exploring the option of introducing a Food Traffic Light System into HSE Sites

Figure 9: FCW Traffic-Light Display

Figure 10: FCW Shelf-Edge Labelling
Some More Go – Exploring the option of introducing a Food Traffic Light System into HSE Sites

Nutritional Software Packages

Loose food is a difficult entity to allocate strict nutritional label formats or criteria. Portion sizes, ingredients and frequent menu changes, as well as accommodating consumer choice at the point of sale, makes it difficult. These issues arise in every individual catering facility which compounds the problem. In simple terms, standardisation of food in even one site is extremely difficult to achieve. Calorie posting is an excellent first step in this process but is not without its challenges (discussed below). To facilitate standardisation of loose food, food analytical software is available. A number are in use in Ireland but the two most commonly used are MenuCal and Nutritics.

MenuCal

MenuCal[33] is a free online easy-to-use tool developed by the Food Safety Authority of Ireland to help food businesses in Ireland calculate calories in food. It was developed to address the food industry’s concern about the lack of expertise and resources to accurately calculate calories for display on menus and the associated costs involved. It acts as a resource to assist chefs identify calorie values, taking account of types and quantities of ingredients used, method of preparation and portion size. MenuCal contains over 2,000 basic ingredients and also allows the user to add their own specific ingredient information to suit their business.[33] Having calories posted supports consumers to make more informed choices about the food they purchase.

Menucal was further enhanced to help food businesses comply with their legal requirements to display allergen information (14 categories of allergens) on foods. It was developed with the input of chefs, caterers, small business owners, nutritionists and computer scientists.

Research from the FSAI found that 95% of consumers would like calorie labelling on menus in all or some food outlets.
**Nutritics**

Nutritics[34] is an Irish software company launched in 2013 and used by some HSE sites, the NHS, Public Health England, Weight Watchers and Heart UK. There is a cost to using this package. It provides in-depth nutrition analysis, recipe analysis tools and meal planning tools. These tools help dietetic & catering departments to comply with allergen, calorie labelling and to providing a TLS with nutrient information.

Both software packages require training in their use as well as adherence to portion size, use of ingredients etc.

**Traffic Light Systems in use in HSE catering facilities in Ireland**

Currently there are different projects being implemented in HSE catering sites to help direct consumer choice towards healthier foods at the point of sale. Initiatives such as the IHF Awards and food catering options such as the Aramark system and the calories posting, which is being implemented across the HSE, are examples of how caterers are trying to address healthier food choices and information. Specific to the current project are two different facilities where a form of TLS has been piloted. These are presented as site examples below.

**Site 1 - St Columbanus Hospital, Killarney**

**System used**
The catering team in St Columbanus Hospital in Killarney worked with Community Dietitians, the Dietitian Manager, the Director of Nursing and the Residential Services Manager for Older Persons to introduce a form of TLS for their loose food in the canteen in February 2017. A dietitian was assigned for a ten day period to introduce the system. Their TLS is based on the existing calorie posting system and the traffic light colours are used to highlight the food items, dependent on their calorie count. Only green and red are used.

Two concurrent initiatives are working with the TLS in Killarney. One is a drive to reduce portion size and the second is a table-top campaign advising consumers of how small changes can make a difference in drawing their attention to food choices Pics. 5 & 6.
Some More Go – Exploring the option of introducing a Food Traffic Light System into HSE Sites

<table>
<thead>
<tr>
<th>Breads</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Diggers Tomato Wraps (25cm)</td>
<td>190kcal</td>
</tr>
<tr>
<td>Hazels Blueberry Muffins</td>
<td>365kcal</td>
</tr>
<tr>
<td>Hazels Chocolate Muffins</td>
<td>401kcal</td>
</tr>
<tr>
<td>Mc Cambridge Brown Soda</td>
<td>86kcal</td>
</tr>
<tr>
<td>Mc Cambridge Wheaten Bread</td>
<td>79kcal</td>
</tr>
<tr>
<td>Pat the Baker Buttermilk Soda</td>
<td>60kcal</td>
</tr>
<tr>
<td>Pat the Baker White Bread</td>
<td>60kcal</td>
</tr>
<tr>
<td>Pat the Baker Wholemeal Bread</td>
<td>60kcal</td>
</tr>
<tr>
<td>White Cherry Scones</td>
<td>292kcal</td>
</tr>
<tr>
<td>White Coffee and Walnut Scones</td>
<td>323kcal</td>
</tr>
<tr>
<td>White Fruit Scones</td>
<td>292kcal</td>
</tr>
<tr>
<td>White Scones</td>
<td>270kcal</td>
</tr>
<tr>
<td>Wholemeal Scones</td>
<td>291kcal</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Confectionary Items</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadbury’s purple snack bar</td>
<td>263kcal</td>
</tr>
<tr>
<td>Cadbury’s yellow snack bar</td>
<td>285kcal</td>
</tr>
<tr>
<td>Jacob’s chocolate creams</td>
<td>201kcal</td>
</tr>
<tr>
<td>Jacob’s custard creams</td>
<td>192kcal</td>
</tr>
<tr>
<td>Jacob’s digestives</td>
<td>110kcal</td>
</tr>
<tr>
<td>Jacob’s golden shorties</td>
<td>110kcal</td>
</tr>
<tr>
<td>Jacob’s ginger nuts</td>
<td>121kcal</td>
</tr>
</tbody>
</table>
Some More Go – Exploring the option of introducing a Food Traffic Light System into HSE Sites

Pic. 4

Pic. 5

Pic. 6
Learning
There are several lessons learned from this example.

- The team used Menucal in order to determine calorie content of over 80 recipes and this involved a lot of work.
- Portion size and control is very difficult. They used standardised scoops but food stuck to the scoops – the method ‘is not foolproof’.
- Standardised recipes and portion sizes had to be agreed and set.
- Standardised portions of salads using existing serving spoons were agreed.
- Healthier options for meals (such as diet yoghurts, availability of more fresh fruit, highlighting calories of dishes, using two different sizes for potatoes, chips etc) were included.
- Scone size was reduced to reduce calorie intake and this has proved very popular amongst consumers. They gave consumers the option of buying two for the same price but there was no take-up of this offer.
- Portion size overall has been reduced.
- A staff survey was conducted initially by the team and it is hoped to conduct a follow-up report.
- The Community Nutrition and Dietetic Department were very happy to oversee the work that was done by a Dietitian in St. Columbanus. A community Dietitian was funded for ten days to gather recipes, work with staff, meet with catering managers and standardise recipes etc. Further work was then needed with the launch of the campaign, posters, laminated flyers for tables etc.
- Future work highlighted was that this work needs to be monitored. The campaign would need to be refreshed with new flyers highlighting new information of foods eaten. The allocation of a community Dietitian to 10 days work was only sufficient for the work involved in the initial analysis and launch of the campaign. More dietetic work is needed for follow up and monitoring compliance, difficulties encountered, changes to recipes etc. Currently funding is not allocated for this.
Site 2 – St Camillus Hospital, Limerick

St Camillus Hospital in Limerick has been implementing a TLS in their canteen. This has been done with the input of the catering manager, dietitians, catering staff and management support. They have found that their consumers want simple, well informed, quick-guide choices made for them for healthier eating. They have found that consumers aren’t interested in doing calculations and reading labels and like it ‘done for them’.

System used
The hospital has assigned one colour to each meal rather than four individual colours for each of the four nutrients. Pic. 8. This is the interpretation of a TLS applied by the individual site. The catering manager is working on the basis of keeping it simple rather than over complicating the message.

The staff calculate the information in terms of nutrition – salt, fat, saturated fat, sugars and calories and a dish is allocated green if the calories are less than 200 and salt and sugar content is less than the RDA. Like St. Columbanus, the staff also use ‘common sense’, if a food is deep fried it is less healthy than if it was grilled.

The hospital received Irish Happy Heart Healthy Eating Gold award earlier this year which is greatly valued.

Learning
There are several lessons learned from this example.

- The team used Nutritics but extensive training was needed, both in using the software and in TLS rollout.
- As with St. Columbanus, portion size is very important and monitoring this is vital, or it ‘throws the whole system out’
- They found that packaged foods are easier to assign a TLS to than loose fresh meals.
- There needs to be a standardised green, amber, red option which would be the same regardless of where offered. It needs to be agreed nationally.
- There is a lot involved in the rollout and inputting of software and mechanisms so a specialised professional team should be established with catering expertise to advise before this would happen.
- Staff are very interested in implementing TLS
- In order to ensure staff and management buy-in the process should not be too complicated
Discussion and Conclusions

Discussion

In comparison to other nutrition labelling systems, TLS has been rated as more user-friendly. Although critics have argued it oversimplifies food nutritional information, and there are undoubtedly arguments for and against the use of TLS, it is not the purpose of this report to explore these in detail. This report is to feedback on the proposal of introducing a TLS into HSE staff sites where calorie posting is already fully implemented.

Legislation requires a considerable amount of information about the nutrient content of food to be included on a food item, and although the amount and type of information required on loose foods differs (see Diagram 1), the intention, whether on packaged foods or loose foods, is to facilitate the consumer make an informed food choice.

TLS is a method of food labelling aimed at simplifying this information in order to help the consumer make an informed food choice ‘at a glance’ at the point of sale. TLS colour codes the four main nutrients – fats, saturated fats, sugar and salt – so that it is readily apparent if there are high, medium or low levels of that nutrient contained in 100g of that food.

It is HSE policy to have calorie posting in HSE sites throughout the organisation. This is being implemented currently across the HSE as referenced earlier. Building on this, it is proposed to introduce a food traffic light system (TLS) to provide staff with additional nutrition information, which is easy to understand and use; facilitating healthier food choices at the point of sale. This objective in essence means applying a TLS to loose food. Although there are available TLS definitions for packaged food, canteens, although not exclusively, generally serve loose food.

This report has identified four major areas concerning TLS that must be understood and decided before TLS can be implemented in HSE sites.

- **Packaged food versus loose food**
  TLS is based on knowing the nutrient content of each food item. Legislative requirements makes applying TLS straightforward for packaged foods. Legislation around loose food is very different, with allergen information being the only mandatory ‘nutrition’ information required. Knowing the exact nutrient content of loose food is much more difficult. Applying TLS to loose food is much more difficult.

- **Definition and understanding of TLS**
  There are many different definitions and understandings of TLS. TLS is a hybrid labelling system providing nutritional information, and opinion or recommendation. The degree of nutritional information and opinion varies in representations and the visualisation of the TLS is also hugely variable. Further, the implementation of TLS to loose food has varied from applying a colour to individual food items through to applying a colour to a composite meal.

- **Criteria in defining a TLS**
  The breakdown in terms of the amounts of nutrients allocated to each colour varies between organisations and countries. There are no nationally agreed criteria in Ireland.

- **Implementing a TLS in HSE sites**
  Site examples have demonstrated that the implementation of TLS requires staff and management buy-in, commitment, training and time; as well as agreed application criteria.
Packaged food versus loose food

Studies of TL Systems in restaurant or cafeteria settings (open foods) have not been conducted as often as they have been done in grocery settings. In the studies that have been done a TLS can be used to indicate healthy and less healthy options on offer. This is distinct from colour coding individual nutrients as described in the FoP labelling.

In Ellison et al’s study[35] the TLS was based on the number of calories in a meal. Individuals were presented with a green, yellow, or red traffic light system where green light options contained 400 calories or less, yellow light options had between 401 and 800 calories, and red light options consisted of more than 800 calories.

In Thorndike el al’s[36, 37] research on TLS, the signage highlighted that green meant “consume often”, yellow meant “consume less often”, and red meant “there is a better choice in green or yellow”. The criteria for this TLS were rated on three positive and two negative criteria. The positive criteria were having the main ingredient 1) fruit or vegetable, 2) whole grain, or 3) lean protein/low fat dairy. The two negative criteria were saturated fat and calorie content.

These systems are not unlike the implementation of TLS in both of the HSE sites – St. Camillus and St Columbanus Hospitals – and the IHF Awards system. Similarly, the Food Choice at Work and Aramark programmes employ versions of Ellison’s work and Thorndike’s. In essence, TLS as employed in the Irish contexts mentioned as well as that referenced by the research studies, demonstrates the varying applicability of a TLS for loose food and even more notably, the degree to which the system employed is a hybrid of different systems or a variation on a system employed for packaged food.

Existing TLS address packaged foods where the exact amount of nutrients per 100g is already legislatively required. Portion size, varying ingredients, number of ingredients and changing menus as well as decisions around applicability for composite foods and meals rather than just individual items are all issues concerning applying TLS to loose foods.

Definition and understanding of TLS

Understanding of and visualisation of TLS as applied to loose foods also needs to be determined. What is the message being conveyed – is it that meal x is more healthy than meal y; or is it up to the consumer to decide if s/he wants some individual items that are red, some that are amber and some green and then approximating the overall ‘healthiness’ of the meal; or is a more reductionist option, whereby some foods on offer are marked red and some are marked green and the remainder unmarked the ideal? Can the consumer assume that what is red in one premises is also red in another, or the categories or cut-off points different? Ellison’s study above and the cut-off points for St Camillus Hospital suggest there might be variances. In St Columbanus Hospital the cut-off points were decided differently to St Camillus Hospital. Such variances are tolerable but need to be understood.

In terms of the message to be communicated around TLS, agreement is needed about what is meant by green, amber or red. In Ellison’s study red indicated a meal of more than 800 calories. Food Choice at Work and St Camillus Hospital incorporate a percentage of the recommended daily amount (RDA) and the IHF indicate red if food has sauce or is fried. This is not suggesting they are contradictory but are they the same? If something is green, is it healthy and therefore good for you or is it just not bad for you? What does green mean – is it healthy or can we have as much as we like? Diet 7-up usually gets a green because it is low in the four specified nutrients (saturated fat, fats, salt and sugar). Cheese can get mainly reds on the TLS because of high fat content, high saturated fat content, high calories and high salt but the benefits of calcium and protein are not considered. The importance of the message conveyed is not insignificant. Are we unwittingly
Some More Go – Exploring the option of introducing a Food Traffic Light System into HSE Sites

detracting from the message of a balanced diet to one encouraging consumers to reject nutrients labelled in reds and ambers? Is the message clearer by applying a TLS to individual food items or to whole meals?

Critics argue that the use of just three signalling colours oversimplifies complex dietary relationships and that this leads to an oversimplified, unrealistic and consumer unfriendly labelling: good products v. bad products[19]. This adds to the question of message and what is the message the HSE wants to convey?

**Criteria in defining a TLS**

As evident in the label continuum above (Fig. 1) even TLS for FoP can vary in the information they import and the extent to which they are solely based on nutrient content or incorporate a degree of recommendation or opinion. Food labels are also subject to being read differently by different people [24]. As clearly evidenced throughout this report there are variations in the so-called ‘agreed’ cut-offs or criteria for what constitutes red, amber and green for FoP TLS. Shopping cards and recommendations quote differing values for the same nutrients. Further compounding this, their layout differs which makes it difficult to read across from one to the other; or read ‘at a glance’.

Of greatest significance however, is that there is no nationally agreed consensus around TLS criteria in Ireland. This point was also highlighted in the lessons learned in the HSE sites reviewed.

**Implementing a TLS in a HSE Site**

This document is about the implementation of a TLS in a HSE site where the majority of food served is non-packaged or loose food, for which there is almost no legislative requirement concerning the labelling of nutrients content apart from allergens. This makes the implementation of a nutrient based TLS difficult, particularly because the nutrient content of a food is calculated on the proportion of that nutrient in the food. Implementation is dependent on standardised portion sizes. The amount is immediately distorted if portion sizes vary. This is one reason that the implementation of the calorie posting policy in HSE sites has had varying degrees of success. Portion control in sites is difficult and ‘needs to be forensically monitored’ to quote one respondent overseeing the implementation of calorie posting. This is further compounded where different sites have different chefs (who use their own recipes) and different ingredients in a composite food or meal.

There needs to be buy-in from management and support for and commitment by staff. Training in the use of the appropriate software and recognition of the undertaking in terms of the number of food items, ingredients and menus deployed daily across HSE staff canteens. The input of dietitians is integral to the process.

**Conclusions**

Calorie content helps inform people when choosing their meals. Where colour coding has been implemented it has been generally welcomed. A TLS of the nutrients would greatly complement calorie posting. A TLS would build on calorie posting and help consumers make healthier food choices at the point of sale. Although difficulties have been identified in the foregoing report, the key point to their identification is in order to prepare properly for the introduction of a system that is both new and potentially beneficial. Staff and management buy-in is key to the successful implementation of any policy and that buy-in and commitment is more likely to be achieved if thorough planning, engagement and foresight is employed. This emphasises the importance of having a fully developed implementation plan for any project roll-out in the health service.
Some More Go – Exploring the option of introducing a Food Traffic Light System into HSE Sites

Standardised, nationally agreed criteria would be the corner stone to the success of TLS in Irish HSE sites providing food. Standardised training for all staff would need to be implemented and any software utilised for delineating nutrient content would also have to be agreed and policy based nationally.

The biggest question we were faced with in introducing a TLS into HSE staff sites was what we mean by a TLS. Personnel working in catering as well as senior managers posed this question and were themselves unable to give a clear answer. To conclude then, before implementing a food traffic labelling system, what does the HSE mean by a food traffic light system?

**Recommendations**

- Agree what is meant by a Traffic Light System for loose food
- Review other food labelling systems to verify if TLS is the preferred choice
- If using the TLS, agree the criteria to be used and the cut-off points for nutrients
- Consult with relevant stakeholders to progress this piece of work
- Stakeholders to include the following but not exclusively: dietitians, chefs, catering managers, catering staff, hospital or site managers, operational managers
- Incorporate TLS in to HSE policy
- Develop an implementation plan to roll out the TLS
- Provide training for all staff involved in the implementation of food TLS in the selected software for nutrition analysis
- Provide ongoing support to staff implementing the TLS

Based on the learning from the pilot interventions of calorie posting, a guidance document was developed to support staff to implement the policy[6]. The guidance document listed the following steps to implementation and should at a minimum be adapted for implementing TLS:

- Gain buy-in and commitment from senior management in the health service. Identify a lead person and set up a working group. The working group should consist of personnel needed to support implementation i.e. Catering Manager/Catering Staff/ Facilities/ Dietetics/ Health & Wellbeing
- From the onset there is a need to build momentum for calorie posting. Communicate with staff, visitors and suppliers. Prepare for displaying calories as specified in policy.
- Set realistic timeframes and goals and identify key milestones. Appoint staff and resource items needed.
- Provide training and guidance for appropriate staff.
- In the planning stage, consider how best to standardise recipes and portion sizes for all food options as well as how to resource standardised utensil sizes (e.g. ladle sizes, dish sizes, etc).
- Catering departments will lead on training staff to input recipes into an agreed nutritional software package. Dietetic departments may have their own nutritional software packages. Calorie posting should be done collaboratively with dietitians.
- Monitor purchasing trends, both before and during the implementation.
- Management must continue to implement the policy, to provide on-going support for calorie posting and manage any issues that arise.
Acknowledgements

We are extremely grateful to all those who helped us with such enthusiasm as we gathered information on, and increased our knowledge of, Food Traffic Light Systems. Everyone we spoke with expressed interest and passion in helping to deliver healthier food choices. Huge thanks to:

- Bridget Clarke, Healthy Ireland & Cross Border Project Manager, RCSI Hospital Group
- Catering Staff, St. Finbarr’s Hospital, Cork
- Christine Gurnett, Senior Community Dietitian, Health Promotion & Improvement
- Clare Kelly, Operations Lead, Food Choice at Work Ltd, Cork
- Dave Molloy, Assistant National Director, Environmental Health Service
- Deirdre Power, Regional Manager, Aramark
- Dr Fiona Geaney, CEO, Food Choice at Work Ltd, Cork
- Dr Mary O’Mahony, A/Director of Public Health, Cork
- Dr Mary Flynn, Chief Specialist Public Health Nutrition, FSAI
- Dymphna Mc Gettigan - Dr. Steevens’ Library. Health Service Executive.
- Edel McNamara - Senior Community Dietitian, Health and Wellbeing Division
- Fergal Fox, A/General Manager, Health Promotion and Improvement DML,
- Freda Horan, Dietitian Manager, Kerry
- Janis Morrissey, Registered Dietitian, A/Health Promotion & Community Presence Manager, Irish Heart Foundation
- Joan Tierney – Health Promotion Officer, Health Promotion & Improvement,
- Kathleen Hehir, Community Dietitian, Kerry
- Laura Molloy, Service Improvement Lead, Mental Health Division
- Margaret O’ Neill, National Dietetic Advisor, Health & Wellbeing Division, HSE.
- Maria Browne, Senior Community Dietitian, Kerry
- RCSI Institute of Leadership Team
- Rory Fay - Catering Manager PCA1, including St Camillus Hospital Limerick
- Rosemary Bracken, Catering Manager, Cherry Orchard Hospital, Dublin
- Safefood
- Sarah McCormack, National Programme Lead, Healthy Ireland
- Sarah O’Brien, National Lead: Healthy Eating and Active Living Programme, HSE
- Suzanne Seery, Senior Cardiac and Weight Management specialist Dietitian, Croi, the West of Ireland Cardiac Foundation
- Colleagues from within our respective departments and within the wider Leadership Development Programme who contributed advice, support, help and even photos!

Sincere apologies if we have unintentionally omitted anyone who has helped us. This is entirely unintentional but entirely possible as we spoke to an enormous number of people along the way.

Thank you all.

Catherine, Joan, Heather, Agatha
Some More Go – Exploring the option of introducing a Food Traffic Light System into HSE Sites

References

6. HSE Healthy Ireland, GUIDANCE FOR CALORIE POSTING IMPLEMENTATION. 2015.
8. FSAl, Calories on menus in Ireland REPORT ON A NATIONAL CONSULTATION June 2012. 2012.
10. FSAl, Comprehension and use of UK nutrition signpost labelling schemes. 2009.
17. Bracken, R. and L. O’Reilly, Calorie Posting in Cherry Orchard Hospital Staff Restaurant HSE Pilot Scheme. 2015.
22. FSA Food Standards Agency, Guide to creating a front of pack (FoP) nutrition label for pre-packed products sold through retail outlets. 2016.
24. (https://www.chss.org.uk/supportus/hps/foodlabels/), C.-. What’s in a label? The five tools you need to decipher food labels!
Some More Go – Exploring the option of introducing a Food Traffic Light System into HSE Sites