Evidence Snapshot APRIL 2012

FOOD LABELLING

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NUTRITION ACTION
Ngā Takawaenga Hāpai Kai Hauora

Food labelling

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Like many busy parents, Tania rushes to the supermarket on her way home from work to pick up some ingredients to prepare dinner for her whānau. As she enters the supermarket she is faced with thousands of different options. What she wants is something healthy, hassle-free and affordable that the whole family will enjoy, but she doesn't have time to look at the nutrition information panel on the back of each packet.

How can food labelling be made easier for Tania to use and understand?

For years this question has been hotly debated. While most groups agree that we need to change the way nutrition information is presented on food, there is no consensus on which format the system should take. The most opposing views come from public health groups, who generally support a system based on the concept of traffic lights, while food manufacturers tend to prefer systems based on percentage daily intakes.

In 2009 the Australian and New Zealand (NZ) governments set in motion a review of food labelling laws and policies. The review concluded with the release of a report entitled *Labelling Logic* (a.k.a *The Blewett Report*) which included 61 recommendations to improve Trans-Tasman food labelling laws and policies[1]. The most significant of these was recommendation 51[1], endorsing the introduction of some form of traffic light labelling system. Australian and NZ Ministers have since agreed to introduce a voluntary interpretive front-of-pack labelling system[2]. At the time of drafting this publication, the decision as to whether the system should be traffic light based was on hold, pending further research into other suitable labelling options[2].

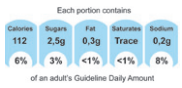
This snapshot has been designed to summarise the research and key points from the debate around food labelling, so that those with an interest in public health nutrition may be better informed to participate in future discussion and action. It follows a framework of five key questions proposed by Swinburn and colleagues[3], which were designed to help translate evidence into action.

1. WHY SHOULD WE DO SOMETHING ABOUT FOOD LABELLING?

Food labels form an important part of a broader basket of initiatives needed to help New Zealanders make healthier food choices. If they are understood they have the potential to empower shoppers at the point of sale to purchase and consume healthier foods[4]. At present, nutrition information panels (NIPs) are the only form of mandatory nutrition labelling in New Zealand, although studies show that many shoppers struggle to use and understand them[5, 6].

FOOD LABEL EXAMPLES

Simple Traffic Light Label



Percentage Daily Intake Guide

Sanitarium Healthy Eating System

Multiple Traffic Light Label


Nutrition Information Panel


Heart Foundation Pick the Tick

[1] Recommendation 51: That a multiple traffic lights front-of-pack labelling system be introduced. Such a system to be voluntary in the first instance, except where general or high level health claims are made or equivalent endorsements/trade names/marks appear on the label, in which case it should be mandatory.

It's a basic consumer right to know what is in our food. But it's getting harder to do so, with fewer of us cooking from scratch and instead relying on an increasing variety of pre-prepared meals, snacks and ingredients[4]. This is further complicated by the fact that we tend to be leading busier lives. So, while we used to compare peaches with peaches, we now find ourselves having to make rapid comparisons between tinned peaches in syrup, peaches in natural juice, peaches in clear juice, peaches with no added sugar or just plain peaches.

Combined, these factors signal a much needed shift in strategy. We need to move away from a system that provides nutrition information in a form that requires detailed background knowledge and high levels of literacy and numeracy to understand. We instead need to move towards a system that is simple, can be interpreted at a glance and has the ability to convey meaning without large amounts of written or numerical information. This is because research suggests the latter format is more likely to help shoppers make healthier choices[7].

2. WHAT AND WHO SHOULD WE TARGET?

We live in a country that essentially believes everyone deserves a fair opportunity. However, it is the same communities that currently have fewer opportunities to succeed that are most disadvantaged by our current labelling system[8].

International research consistently shows that people with a lower education, income and level of literacy are less likely to use and understand nutrition labels[9, 10]. In NZ it is generally our Māori, Pacific and low-income communities that are less likely to use, and more likely to have difficulty interpreting nutrition labels[5, 8, 10, 11].

Knowledge is power; therefore it is important that we create an environment where all New Zealanders are able to access information about what is in their food. While one system will not suit all, a system that works for high need groups will most likely work for the general population. The reverse is unlikely to be true.

3. HOW AND WHERE SHOULD WE INTERVENE?

Support has been gathering for front-of-pack nutrition labels both internationally and within NZ. With lack of time being one of the most regularly cited barriers to reading labels[12], placing information on the front of packages where it is immediately visible to shoppers can help to speed up the decision making process[13-16].

Information presented on the front versus back/side of packages has been shown to be more likely to influence shopper behaviour[9] and has the potential to encourage product reformulation[2].

Front-of-pack labels are generally liked by shoppers[14]. Labels that use graphics and symbols tend to be easier to interpret than traditional back or side-of-pack NIPs containing large amounts of numerical information[17-19]. Front-of-pack labels are seen as a useful compliment to back-of-pack NIPs[20]. When combined, these two systems cater for the needs of those who want information at a glance and those who want continued access to more detailed information[20].

However, as support has grown for front-of-pack labels, so too has the number of different front-of-pack labelling systems present on the market. Research suggests that the coexistence of numerous labels has only added to shopper confusion[6, 21, 22] and may have even encouraged people to consume more than they would otherwise have done[16]. These findings highlight the need for one simple, standardised system that translates information from the NIP to a quickly and easily understood health message, making healthier options easier to identify.

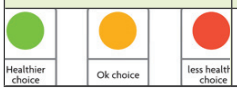
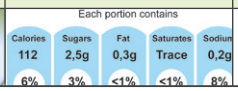
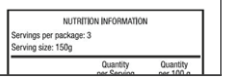
4. WHAT COULD WE DO?

Table one provides a summary of the various pros and cons of the most frequently proposed labelling formats. A detailed summary of research on label use, understanding and the impact of different labelling systems on shopper purchasing behaviour is available on pages 7 and 8. In short this research suggests:

- Shoppers largely prefer traffic light based labels over other labelling systems[5, 8, 23-27].
- Traffic light based labels are better understood across all ethnic and income groups[5, 25, 28] and are better at helping shoppers to identify products with poorer nutrition profiles[9, 26, 29, 30] than other label systems.
- There are limitations to the current evidence base with regard to the impact of labels on food purchases and consumption. Evidence is emerging that a traffic light based system, implemented over a range of products, might result in a shift to healthier diets over time[31, 32].

[2] It could however be argued that tweaking products to make mildly healthier options only complicates the process of making healthier choices by adding more options to supermarket shelves.

TABLE ONE: What are the **PROS** and **CONS** of different labelling formats?

FRONT OF PACK LABELS					BACK/SIDE OF PACK LABELS
Traffic Light Based Systems			Percentage Daily Intake Guide	Pick The Tick	Nutrition Information Panel
Simple Traffic Light	Multiple Traffic Light	Healthy Eating System			
					

PROS					
• Simple design. • Easy to understand because shoppers are aware of the significance of traffic signals. • Relevant to all age groups, genders and life stages. • Less easily manipulated, e.g. by changing serving size. • Likely to motivate manufacturers to reformulate products.	• Pros as for simple traffic light with the added benefits of... • Provides added information on specific negative nutrients. • Health professionals can give tailored advice to patients, such as "look for green lights for salt" if they have high blood pressure.	• Builds on the strengths of traditional traffic light labels by adding information on positive nutrients such as fibre. • Incorporates an overall dietary advice statement, e.g. "eat often"; "eat occasionally" or "eat sparingly".	• Covers a wide range of nutrients. • Based on per serve of food, rather than per 100g.	• Simple design. • Easily recognisable. • Can motivate manufacturers to reformulate products in order to meet eligibility criteria.	• Mandatory on all packaged foods in NZ. • Displayed in a consistent format across all foods. • Provides in-depth information on both positive and negative nutrients.
CONS					
• Generally opposed by food industry (who argue traffic light based systems fail to put foods into the context of a healthy diet) and therefore harder to implement. • Doesn't take nutrient density or portion size into account.	• Also opposed by industry. • Doesn't take nutrient density or portion size into account. • Provides no overall recommendation for consumption of foods which have a mix of red and green lights. • Requires a complicated nutrient profiling system to classify foods and nutrients as red, amber and green. • UK system developed to only apply to limited food categories.	• Research suggests shoppers tend to look for negative nutrients on labels, therefore including positive nutrients may add unnecessary detail and may confuse shoppers. • The measure of fruits, vegetables, nuts and legumes is a new concept, which may be difficult for shoppers to understand. • Concept not tested with NZ sample and research to date only conducted by Sanitarium in Australia.	• Single colour makes it difficult to interpret at a glance. • Calculations based on requirements of average 70kg adult, therefore guide may not be applicable to all. • Based on a manufacturer specified serving size, which is unlikely to be consistent across products. • Requires user to have an understanding of percentages.	• Covers mainly processed foods. • Payment for eligibility test, could exclude cheaper brands and smaller manufacturers. • Shoppers may believe endorsed products can be eaten often when the endorsement only indicates a healthier option within a range. • Product may be high in sugar, because sugar is not currently part of eligibility criteria.	• The in-depth and quantitative nature of the information presented can be difficult to interpret and confusing. • Generally busy shoppers don't have the time to study it. • The panel can be small and hard to read.

5. WHAT SHOULD WE DO?

This snapshot provides a summary of the research to date on food labelling.

In reviewing this research the following is clear:

- A labelling system without limitations does not exist.
- It is difficult to conduct robust experimental studies in a real world setting, therefore there are limitations to the current evidence base.
- Further research particularly with New Zealand's low income, low literacy and ethnically diverse populations in the real world setting is required.
- Further research which looks at the actual impact of food labelling on food purchases and consumption is also needed.

Proposed public health actions are often challenged on the grounds of a lack of evidence. Of course, our policies and programmes should be informed by evidence, but Swinburn and colleagues[3] argue that this means using the 'best evidence available' as opposed to the 'best evidence possible'. In this snapshot the 'best evidence available' supports some form of traffic light system, over other systems because:

- Research consistently shows shoppers can understand traffic light based systems better than other systems (further research is required to determine the exact appearance of the final traffic light based system. This research should be funded and led by neutral groups who do not have a commercial interest in food labelling).
- Current labelling systems are not working for many Māori, Pacific and low-income shoppers. If we are serious about giving all New Zealanders the same opportunities to good health, we need a system that better meets the needs of these communities. There is good evidence to support a traffic light based system as having the most potential for empowering these communities to make healthier food choices.

To maximise the system's potential to empower shoppers at the point of sale it needs to be:

- Standardised, mandatory and consistent from brand to brand and store to store. This will help to reduce confusion and simplify the task of choosing healthier foods.
- Accompanied by a comprehensive education campaign designed to enhance the ability of all population groups to use and understand the new system. The campaign should coincide with the system's introduction.

WHAT CAN YOU DO?

The key take home message from this snapshot is:

Shoppers need a simple guide on the front of food packaging that helps them to quickly identify healthier food options. The best evidence available suggests that, in comparison to other labelling formats, shoppers will be more likely to use and understand traffic light based labels. Further work and research is required to develop a traffic light based label suitable for adoption in NZ.

Because food labelling is ultimately dependent on legislative change, key actions predominately involve advocacy and submissions. Here are some ideas for how you can get involved in future debate and action:

- Link in with like minded organisations, such as Agencies for Nutrition Action, who are prepared to provide support in writing submissions.
- Utilise the wording and references used in this snapshot for media, submissions and other relevant activities. Our voices are far more likely to be heard if we share a consistent message.
- Join the subscription service for Food Standards Australia New Zealand so that you can keep up to date with submissions and developments in the area of food labelling.

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SUMMARY OF RESEARCH FINDINGS TO DATE

Do shoppers use labels and what are their preferences for label alternatives?

New Zealand Research	Australia and International Research
Gorton and colleagues[5] studied labelling use and preferences among ethnically diverse shoppers (n=1525). Reported use of NIPs ranged from 66% to 87% by ethnicity. Label use was lower in males compared to females and Māori verses NZ European. Four label formats were tested: a simple traffic light (STL), a multiple traffic light (MTL), a nutrition information panel (NIP) and a percentage daily intake guide (DIG). Overall the MTL was the most preferred option, especially for non label users. In another study, Gorton and colleagues(23) used focus groups to explore label use among Māori, Pacific and low-income shoppers. Māori and Pacific participants reported little to no use of labels, while the majority of Pakeha participants reported using labels regularly. Five labelling formats were tested: a STL, a MTL, a Guiding Star System and a DIG. Results suggested that people liked the reassurance of having more detailed information as provided in MTLs, but generally based their decision on STLs. A study by Signal and colleagues[8] used focus groups comprising Māori, Pacific and low income participants to explore knowledge and use of several labelling formats. Participants (n=158) reported rarely using NIPs or the Heart Foundation Tick. Three alternative label formats were tested: a STL, a MTL and a food pyramid. In general participants preferred the STL and MTL formats as they were easily understood. Heart Foundation research[27] finds 83% of participants (n=unknown) have used The Tick and 43% always or regularly use The Tick to make purchasing decisions.	Research by Australia's Obesity Policy Coalition[24] found nine in ten shoppers preferred labels in the form of traffic lights. Kelly and colleagues[25] asked which front-of-pack labelling system shoppers (n=790) thought would be easiest to use. Four formats were tested: a MTL, a combined STL and MTL label, a single colour DIG and a colour coded DIG. Participants felt they could compare two products at a glance fastest with the traffic light based labels. Another Australian study[26], tested three label formats: a MTL, a DIG and the Sanitarium Healthy Eating System. The vast majority of participants (n=855) preferred the Healthy Eating System to MTLs and DIGs. Researchers also found almost half of those surveyed never used DIGs. Food Standards Australia New Zealand reported in a study that use of DIGs by shoppers is very low[33]. Research conducted by the National Heart Foundation of Australia[34] found that traffic light labels were perceived by participants (n=600) to be the most helpful in making healthier food choices when compared to DIGs and the Heart Foundation Tick.

Which label(s) is most easily understood and interpreted by shoppers?

New Zealand Research	Australia and International Research
Research by Gorton and colleagues[5] found that while two thirds of participants could correctly identify basic information using NIPs, interpreting this information to determine whether a product had a lot, some or not much fat was more challenging. Results also showed STLs and MTLs were best understood across all ethnic and income groups. In contrast DIGs performed poorly with less than 50% of participants able to correctly determine if a food was healthy using this system. In a study by Signal and colleagues[8], participants reported 'lack of understanding' as a major reason for not using NIPs. Although participants considered the Tick easy to use, there was some confusion around its interpretation.	Research by Kelly and colleagues[25] found participants were between three and five times more likely to indentify a healthier product using an MTL or combined STL and MTL label than a DIG label. The DIG system was especially difficult to interpret for shoppers from lower socio-economic groups. Concept testing for Sanitarium's Healthy Eating System found participants were more likely to correctly identify a food as healthy using MTLs or a Healthy Eating System label than DIG labels[26]. Research prepared for the UK Food Standards Agency[36] tested participants (n=2932) on labels containing combinations of text (HIGH, MED, LOW), traffic light colours and DIG labels. Results showed a label combining all three schemes achieved the highest levels of comprehension. *Continued...*

New Zealand Research

Research conducted by Food Standards Australia New Zealand[35], found most participants (n=681) were able to read and interpret NIPs on single products, but struggled to make product comparisons.

In a study by Maubach and Hoek[29], participants (n=294) were asked to evaluate the nutritional quality of two children's breakfast cereals. Three labelling formats were tested: a traffic light based label, a NIP and a DIG. Researchers concluded that traffic light labels appear better able to help shoppers identify products with poor nutrition profiles, and thus may be more effective than DIGs in promoting healthier diets.

A review of nutrition labelling conducted in 2007[28], concluded MTL labels provide the most consistent consumer benefits because they are well understood across multiple consumer groups and they allow fast decision making. The review also concluded DIG labels are not liked or well understood by NZ shoppers.

Australia and International Research

Research by Borgmeier and Westenhoffer[30], exposed participants (n=420) to one of five labelling formats including: a simple "healthy choice" tick, a MTL, a monochrome Guideline Daily Amount label (GDA) (similar to a DIG), a coloured GDA label and a "no label" condition. Participants made the most correct assessments on whether a food was healthy or not using the traffic light system.

A systematic review published by Campos and colleagues[9] reported strong evidence that traffic light based symbols increase shopper ability to identify healthier food options. Researchers found mixed evidence with respect to the level of detail favoured by shoppers on front-of-pack labels. They noted that while some research suggests shoppers like percent daily values, in reality many struggle to apply this quantitative information.

Do front-of-pack labels influence food purchases and consumption?

International Research

Research is limited when it comes to the impact of labels on purchasing/consumption behaviour. Although systematic reviews show a consistent relationship between label use and healthier diets, there are limitations to the current evidence base. For example, research to date relies largely on self-reported data and experimental studies which often use settings that are different from a normal shopping experience. While labels may promote healthier diets, it is also possible that individuals with healthier diets are more likely to read labels in the first place. A snapshot of research to date in this area is summarised below:

Research by Sacks and colleagues[37] used sales data from a major UK retailer to assess the impact of traffic light labels on food purchases. They found no effect on consumer purchases over a four week period following the introduction of traffic light labels. The authors noted substantial limitations to their research and concluded that the findings did not exclude the delivery of public health benefits through a traffic light system.

In 2011 Sacks and colleagues[38] conducted a 10 week intervention in a major Australian online grocery store. MTLs were displayed on the product listing page of 53 of the retailers own brand products. Product sales before and after the introduction of MTLs were examined. No significant impact on sales was observed. Researchers again acknowledged substantial limitations to their research including the study's short time frame and identified a need to examine the impact of providing MTLs in different contexts, for a longer duration and on more products, with and without complementary awareness and information campaigns.

In 2011 Sacks and colleagues[32] undertook a cost-effectiveness analysis for implementing traffic light based labels. Based on an estimated 10% shift in adult consumption towards healthier options, analysis predicted an average weight loss of 1.3kg per person and the prevention of 45,100 years lived with disability. The cost of implementing traffic light labelling was estimated at AUD81 million. Researchers concluded the implementation of traffic light labelling would likely offer excellent value for money.

Exposing participants to five different labelling conditions, Borgmeier and Westenhoffer[30] asked participants to select foods they would like to consume the following day. The task was designed to explore the influence of different label conditions on food purchases. No significant difference in selection was observed, however researchers concluded traffic light labels could still result in improvements in diet because they would encourage product reformulation.

In a UK study by Sutherland and colleagues[31], purchasing data from a supermarket chain was used to examine the effect of a point of purchase nutrition label which used 3 stars to indicate the nutritional quality of foods and beverages. Results showed a significant change in food purchasing immediately after introducing the label to shelves.