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Abstract

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Bom dia – thank you for the opportunity to come to Brazil, meet with friends and colleagues and talk with you today about the important issue of the obesity pandemic and the potential of the food label to impact on public health issue. This is my third visit to Brazil – which I like very much – and I hope that you will all have the opportunity of visiting my country, Australia, as I have visited your country.

Just a little geography to start. Our two countries are about the same size. However, Australia's population is around 23 million, while Brazil has over 200 million.

Australia does beat Brazil in another area – rates of overweight and obesity. In Australia, adult rates of overweight and obesity continue to grow – around 70% for men and 56% for women at the current time. Your rates in Brazil, at around 50%, are currently lower but on the same trajectory. At least in Australia the rates of overweight and obesity for children have at least levelled off over the last 8 years at around 25-26% of the population.

So why is this a problem? The latest data on burden of disease clearly illustrate why we should be concerned. For Australia, dietary risks and weight were the top two contributors to burden of disease. In Brazil, it is little different, with dietary risks number one and overweight number four. Clearly what we eat is incredibly important to our health.

All countries are exploring ways to arrest the pandemic of overweight and obesity – but with limited success at this time. I have been working in the area of food regulation, including food labelling, for almost 2 decades, and I would like to share some insights from this experience. And while the title of the talk indicates a focus on obesity, as dietary risks are the number one contributor to burden of disease, I will weave in reference to this as well.

In this presentation I will be covering a number of key opportunities with regard to food labelling and its potential to reduce obesity and improve diet.

- I will outline the changes that have been occurring with food labels in Australia
- I will explore the evidence that is available to support the role of food labelling, and
- the weaknesses and gaps in our approaches to date.

Evidence of the impacts of label changes for health is quite limited. Labels clearly do influence people's food choices, otherwise why would food manufacturers spend millions on their labels every year? So we should recognise that we need to be thinking differently about how we use this medium to influence people's food choices.

I will conclude my presentation by identifying some key considerations to maximise the opportunities for food labelling to impact on overweight and obesity and dietary choices that will potentially lead to improvements in health outcomes.

A lot has happened in the food labelling space. Think about some of the past examples of food labelling – clearly focused on enticing shoppers to purchase products, with little consideration of the health consequences. I have some early examples from New Zealand and some more recent ones from the USA. Clearly some of these messages can be confusing for the shopper or provide inappropriate messages. It has also been very difficult for shoppers to compare products and select the healthier choice – particularly in relation to fat content – two slides or fibre content.

And some messages just don't get told – such as when the new 'wonder food components' such as Oleastra were introduced in the USA in the 2000's. At least the US FDA did require statements on the label that the food may cause 'anal leakage' – not a very tempting food choice...

In Australia we started to reel this in a little in the late 1990s and early part of the last decade. When we joined with New Zealand to have a common Food Standards Code, we overhauled all aspects of the food standards code, including food labels. At the time we had a conservative government who was keen on the mantra of 'minimum effective regulation'. We also had high rates of diet-related illnesses and governments were starting to recognise the problems of overweight and obesity. Public health groups were effective in arguing that if shoppers are to participate in the market place they need access to information – we made the following declarations of nutrition and health related information mandatory:

- Allergen labelling
- Use by & Best before dates

- Nutrition information panels – across 7 common components (total energy; total fat; saturated fat; total carbohydrate; simple sugars; protein; sodium) and on a per serve and per 100 gm/ml
- List of ingredients in descending order of ingoing weight (including additives)
- Declaration of % of characterizing ingredients, eg % meat in a 'meat pie' or of apple in a 'apple pie'

At that time we continued the ban on health claims on food labels, but permitted nutrient content and structure/function claims. The use of the claims on food labels was quite prolific – a survey by Williams, Yeatman et al in 2006 identified that of 7850 products surveyed, 14% of products carried some sort of claim, of which 8% were a health claim and around 5% were non compliant - illegal. However, and importantly, the use of claims on food labels did not arrest the rising rates of overweight and obesity.

Clearly access to this type of information alone was insufficient to change people's food choices and poor diets.

More recently other significant actions relating to food labels occurred. In 2010 a review was undertaken of all food labelling law and policy in Australia (and by association New Zealand). The Review Panel made 61 recommendations, of which the governments accepted around 20, agreed to consider another 20 and rejected the other 20 – so a one in three 'hit' rate (not too bad we thought). I'll now outline three particularly interesting outcomes.

If public health groups are to use the label effectively in initiatives to address health problems, there needs to be a systematic approach. Two recommendations that were agreed was - **one**, the need to embed in the food standards legislation a definition of public health, as the first objective was to protect 'public health and safety' – but there had not been a definition of public health – was it just immediate risks to public health, or was it also chronic illnesses?

A **second recommendation** was for an agreed hierarchy of food label considerations – food safety first, preventative health second, and consumer value issues third. This hierarchy is of particular interest as it also considered the appropriate level of regulation, and hence of government responsibility, across this hierarchy - high level of involvement and government regulation and intervention for food safety, through to primarily industry self-regulation for value issues. Preventative health was in the middle – so a grey area regarding the role of government to control, versus that of industry to self-regulate. But at least we now have a model of food label considerations, which provides a basis for discussion and debate. There are several challenges associated with the model which I can outline later if people are interested.

The second outcome of the label review I will highlight is related to health claims – which were a specific area the Panel was directed to review. We recommended that health claims on food labels should be able to be permitted, **IF** there is a government led framework that regulates the claims reflective of the level of risk. Subsequently standards for health claims were developed, but with constraints in place such as qualifying

criteria for foods to be eligible to carry nutrition and health claims, and government approval of high level claims, based on evidence. This system has been in place for a few years now, with limited apparent impact on overall food choices and health impacts. My personal opinion is that claims on foods are a marketing ploy, not a public health initiative, but we do need to ensure that the claims are meaningful and not deceptive. The less confusion in the marketplace the better.

The third area I'd like to highlight from the Labelling Review is that of Front of Pack labelling – another area the Panel was directed to review. The Panel made several recommendations related to this – that the evidence supported the development of a front of pack labelling system that was easily understood and interpretative (this was accepted) and that the evidence indicated it should be a traffic light system (this recommendation was rejected).

Interpretative labelling was important, as the food industry at that time was attempting a pre-emptive strike by introducing a 'thumb nail' system on front of pack – basically the information that was already in the nutrition information panel but positioned in an equally difficult to understand manner on the front. I have seen this on products here in Brazil. It is a ploy of the food industry to say '*we have a system in place, so government does not need to do anything*' – but it is not helpful to shoppers – there is no interpretation of the information to assist in making a healthier food decision. And it can be confusing, as the Dietary Intake is based on a recommended 8700 kilojoule daily intake – hands up how many people in the audience think their diet is based on 8700 kJ per day?

The government then worked with industry, public health groups and consumer organisations to develop a front of pack system – a health star rating system [go to slide information] that was to be underpinned by a comprehensive education and social marketing program.

There were several attempts by industry to de-rail this development, including one which ultimately led to the resignation of the food minister's key adviser (an interesting story for another time). Finally in June of this year the Food Ministers' Forum confirmed its commitment to the health star rating system, to be based on an algorithm or calculator developed by government and which aligns with the same system used for our nutrition and health claims. [Consistency in policy – to be recommended.] The star system included bonus points for fruit, vegetables, nuts and legume content, and for 'positive nutrients' such as fibre and calcium, as these were recommendations within our Australian Dietary Guidelines.

When applied to seemingly alike foods, the differences in nutrient profiles are abundantly clear. Neither of these savoury biscuits are particularly good, but one is 4 times better than the other. Choice (Australian consumer association) also compared children's school lunch items – here is the example of cheese. So you can see from the ratings – one star to five stars – there is a great deal of variation in the seemingly similar products in our supermarkets.

This is what the image will look like (there are a few minor variations the industry can use). We are still awaiting evidence of the food industry's adoption of the system – we understand that both our major supermarket

chains have adopted it and are changing their food labels – but their big launches are yet to happen.

The development of the health star rating system is important for several reasons. Firstly, the development of the system was a collaboration – but the system is clearly reflective of the principles of easily understood, highly visual and based on sound science. The algorithm is / will be available on the government website so all food industries – no matter how big or small – can participate. In fact the first adopter of the system was a small family business making breakfast cereals (note that they adopted the system prior to the final design being approved, so it looks a little different to what will be rolled out).

In developing the Health Star Rating system, the government commissioned both consumer research and economic research. Reports from both areas are available on the government website. The cost benefit analysis by Price Waterhouse Cooper concluded: *"the aggregate benefits of the HSR system in the context of multiple public health initiatives, will likely pay back (ie meet or exceed) aggregate costs over a five year implementation period."*

The consumer research report concluded:

The FoPL system will contribute to healthy food purchase choices

A 'FoPL threshold' was observed at 2.5 to 3 stars, with a 15% increase in volume of purchase of products with 4.5 – 5 stars.

The 'stars plus energy' type of presentation was just as effective as the full FoPL presentation

Demographic groups most sensitive were:

- Mature families (children over 15)
- Young singles / couples
- Under 25s
- 40+ age group

Secondly, there is preliminary evidence from the pre-testing that shoppers will understand it and use it. The evidence of shopper's use of front of pack labelling has been mixed with a recent study by Watson et al (Appetite 2014) identifying no one system performed better than others when assessed using an online questionnaire. However, in situ evaluation over a few years is required to provide more substantive evidence of effectiveness.

Hawley et al, Public Health Nutrition 2013, undertook a structured search of research studies on consumer use, understanding of, preference for, perception of and behaviours relating to FOP/shelf labelling published between January 2004 and February 2011. They found, as we had in the Food Label Review, that the system reported to assist consumers identify healthier food products was the multiple traffic light system. However, we must keep in mind that this system was really the main one available to be evaluated at that time.

Thirdly, and importantly, we believe that food manufacturers will change the composition of their products to achieve a higher star rating. This is where the front of pack system may make a real difference. If changes to the food supply can be facilitated by labelling requirements, more significant changes in the health profile of food choices can be achieved – with less dependence on shoppers own food behaviours.

One of the earliest studies by Vyth et al on the impacts of the 'Choices' front of pack labelling system in The Netherlands reported that the Choices logo had motivated food manufacturers to reformulate existing products and develop new products with a healthier product composition, especially where sodium and dietary fibre were concerned.

Camp et al found that with compulsory trans fat labelling of foods in the US, that the amount of trans fat did decline over a 7 year period, by between 42-47 percentage points in the food they examined, but in one category, cookies, the percentage of saturated fat increased during the same period, so the overall healthiness of the foods did not improve.

Louie et al (2011) found no changes in the composition of breakfast cereals in the six year period during which the Dietary Intake Guide – thumbnails – were introduced (2004 – 2010) , confirming that this front of pack system had little effect on the food supply.

While not linked to labelling per se, initiatives to change the food supply have proved successful. In Australia there has been a major push to reduce the amount of sodium in the food supply. Dunford et al (2011) reported that with a target of 400 mg/100g of bread, the proportion of Australian breads meeting the national target increased from 29% in 2007 to 50% in

2010; the proportion. In New Zealand breads meeting the national target increased from 49% in 2007 to 90% in 2010 (though their target was higher, at 450mg/100g).

This latter point, changes in manufacture, can be assisted by wider adoption of systems by countries. When Australian ministers agreed to the health star rating system, the New Zealand government also adopted it, broadening the customer base for manufacturers. A further incentive has been the adoption of the system by supermarkets, who exert considerable pressure on manufacturers to comply if they wish their products to have shelf space in their stores. We have seen this occur in the United Kingdom, with the adoption of the traffic light front of pack systems by Tesco, and we are anticipating similar pressure will occur within the food retail sector in Australia.

Let me now change to other forms of food labelling. I'll mention two such labels – labelling of meals and pre-prepared foods at point of purchase and barcode scanning of food labels.

Let me first discuss one example of the barcode scanning work that is underway at the moment. The George Institute at Sydney University's Food Switch project is an interesting initiative, which started within a university but with strong community input. It now has a database of over 20,000 food products. Consumers with smart phones can scan at the supermarket and compare products. The system not only has the food labels on line, but also a traffic light rating of its healthiness (they had commenced work on

this prior to the government decision to go with the star rating system). The uptake of this system has been extremely rapid – as have other food label apps for particular purposes, eg allergens, diabetes, etc. At this point it is too early for evaluations....

There have been various ways that meals and pre-prepared foods have been labelled. Some of the earliest activities in this area were labels of workplace canteens and restaurants. There is some evidence that this can be successful Another activity in Australia has been a 'traffic light' system in school canteens. In Australia, students do not have a full lunch at school – only a light meal that they either bring from home or buy in a canteen or cafeteria. In 2010 a national scheme was introduced to control the healthiness of foods offered in school canteens. Schools are required to report annually on their compliance with the system – with is now over 90%, but the impacts on obesity are hard to measure.

Labelling accompanied by organizational education initiatives, in either workplaces or schools, does offer some indications of success. What's important here is that the 'labelling' has been linked to institutional changes in the foods being provided, and thus changes are not just reliant on people's individual food choices. However, the data are still very preliminary and what links, if any, to changes in people's weights have not been possible to measure.

The third area of point-of-purchase labelling is the mandatory declaration of 'fast foods' at point of sale – on the menu. In my state, New South Wales,

this was introduced in 2011. Some process evaluation has been undertaken, which is promising.

However, some testing of the premise that having such information available at point of purchase by Dodds et al reported in 2013 found little evidence that it would impact on purchasing behaviours. They concluded that *"Additional complementary public health initiatives promoting the consumption of healthier foods identified by labelling, and which target other key drivers of menu item selection in this setting may be required"*.

So, what have we learnt to date?

An important public health purpose to being engaged in food label initiatives is to ensure shoppers have access to information that is both understandable and does not cause confusion. People cannot make informed choices if information is not available – preferably at point of purchase. However, we need to keep in mind that our populations have high levels of illiteracy (in Australia ~ 20% illiteracy rate) and innumeracy (in Australia ~38% innumerate). The scientific terms that we use also add to the level of reading required to understand the information – we need to keep it simple.

It is possible to develop labelling systems that can provide consistent and comparable information to shoppers, and systems that the food industry will comply with. Clearly this will require some pressures to adopt the system. Such pressure does not need to be mandation – it could be market pressure exerted by competitors or by retailers.

Adoption of labelling requirements also requires diligent monitoring and surveillance – another topic entirely that I will not go in to today, other

than to say that industries are responsive to shoppers demands – or their fickleness in purchasing – and also to government penalties.

Education accompanying food label information can bring about changes in food choice behaviours in controlled environments. However, the market place is not a controlled environment and concerted education initiatives to increase understanding about food labels is yet to occur. However, making the labelling very visual and easily understood – in Australia's case by linking it to other star rating systems where 'the more stars the better', is a step in the right direction. It also encourages food industries to adopt the system, as one of the major downsides of a traffic light system is that food manufacturers do not want a red stop sign on their products. So of course they would resist governments from introducing such a system.

Social marketing may also make a difference, if it was directly at encouraging people to make choices based on the food label information. However, very little such social marketing has occurred, so the evidence to support its effectiveness is not available.

An important area of **omission** is the enlistment of health and education professionals as food label educators. This is yet to occur. However, if the quite sizable health and education workforces were all using food label information to support their client and student interactions, this is likely to have far reaching impacts. However, we in universities are yet to really promote and demand such engagement of these workforces. If health is

everybody's business, certainly the food label should be considered as one instrument to assist in achieving such change.

Finally and importantly is consideration of what the label represents and if we wish to engage in this medium. Australia's dietary guidelines promote the consumption of fresh fruits and vegetables – and our compliance with the recommended 2 fruits and 5 vegetables is woefully low. We have incorporate consideration of this issue within the Health Star's algorithm ensure some consistency between different nutrition policy initiatives.

The draft Brazilian dietary guidelines does include reference to reducing oils, fats, sugar and salt. However, it also specifically suggests reduction of ready made foods and to eat freshly made dishes, that is, not necessarily packaged foods that carry a food label. The challenge for Brazil is how to incorporate consideration of some of these very important issues into algorithms that could underpin a front of pack labelling system in Brazil.

So we have a dilemma On the one hand do we engage with the food industry debate to try to increase the healthiness of packaged foods, and the reality is that such processed foods are not going to go away, so we need to try to minimise the damage they inflict.

Or do we direct our attention to where the evidence indicates that health gains can be achieved, as per our respective dietary guidelines. If more government attention and university research attention were directed to

ways to increase vegetable and fruit consumption – and in Brazil promoting fresh and staple foods and traditional diets, and less government resources directed to assisting the food industry to gain profits from marginal improvements in the ‘healthiness’ of their processed products, we may indeed impact on the obesity pandemic.

Perhaps, like with cigarette packaging in Australia, we should go with plain packaging of food products, and require graphic images of the illnesses poor diet choices inflict on our bodies.

However, I would not like to see such an approach adopted, as food is to be enjoyed, in company, and should remain a pleasure in life, socially and physically. I look forward to sharing pleasurable food experiences with you during this Congress. Obrigada - Thank you.