



BIENNIAL STAKEHOLDER FORUM

WATerview LAKE ROOM

FIT FOR PURPOSE
FOOD REGULATION
NOW AND IN THE FUTURE

Is the food regulation system fit for purpose? Nutrition and health

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Note: the beginning of this presentation was not recorded

I've taken the framework from the website on food regulatory policy to develop my presentation and used those organising principles along the bottom of the schema. The first box deals with understanding the problem in relation to nutrition, then community consultation (presenting my opinions and recommendations) and then review and summing up.

The main point I want to leave you with is best explained in terms of the frog in a pot analogy. The dilemma is how to save the frog from dying in a pot of water. If you put the frog in boiling water it jumps out. That's the food safety response. Food poisoning is deadly and you need to have systems and processes in place to act dramatically and immediately. However, if you put the frog in the pot and the temperature is allowed to rise slowly the frog will not notice and die all the same. Nutrition is the slow boiling frog problem. It is actually another side of food safety.

Let's begin with nutrition 101. Let me explain to you the nutrition problem. There are two main things to think about in terms of the nutritional composition of the food supply. The first is the delivery of essential nutrients and the second is the balance of total energy in the diet. On the one hand we're focused on nutrients, delivering those compounds to meet requirements. On the other hand, we're looking at foods and total diets. All three nutrition parameters are interrelated. We get nutrients from foods and we eat combinations of foods in total diets. We can examine effects of nutrients, foods or diet at the cellular level studying pathways or we could look at them at the whole body level or we can make observations at population levels. Nutrition is actually a very integrative science. It *is* complex, no apologies - that word's been used many times this morning - but it is tangible and we are able to work well with it.

Here are some pictures showing how chemicals and bioactive compounds work within important areas of human physiology. We can also see how various foods deliver these compounds which affect processes in those pathways. That is the nutrient requirement story. On the other side of the coin, looking at the total amount of food and the total amount of calories, we have the problem of obesity and we know now that body fat is not an inert addition to the body. It influences inflammation and that inflammation leads to chronic disease. So this is serious. This isn't something that happens to some people and not others, and it's not something that we needn't worry about in terms of our food. We do.

Here is another diagram showing how foods, nutrients and total diets are connected and how their consumption influences metabolic health. We can see how obesity is a major public health problem associated with food consumption. Last week DAA ran a healthy weight week campaign and provided these data on the extent of obesity and related cardio-metabolic disease prevalence in Australia. This problem is not insignificant. We have chronic disease occurring at very high levels in our population. We are slowly 'cooking the frog' with our food.

Where does the problem arise in terms of food? There has been lots of talk about Australian Dietary Guidelines. Foods referred to as healthy foods are well-recognised but when we look at the types of foods that people are eating, categorising them as healthy or otherwise presents a scientific challenge. In one of the analyses of the Australian Health Survey, consumed foods were categorised in dietary guidelines terms as core foods or discretionary foods. On face value they're the same food source, such as cereal foods, vegetables, beverages and so on, but there is a difference in nutritional value. In some ways this difference lies along a spectrum, so where along the spectrum, do we need to draw the line in terms of determining where we should be going with standards for food? Here's the second point I want to leave you with, this is not just about whether individual foods are healthy. It's that there's an over-emphasis on what consumers are demanding, when it really should be about how we are responsibly managing our food supply.

Here's an analysis that was published in The Lancet which shows that Australia has one of the best food supplies in the world. It also has one of the worst. And if you put them together, we are mediocre in terms of dietary patterns seen in our population. This is a food supply issue, not just a food demand issue. When we look at analyses of the Australian Health Survey, 35% of foods reportedly consumed on that day came from the category that is not as nutritious, that is likely to be leading towards obesity. And again, it's those categories that you might call vegetables, you might call grains but it's the formulation, preparation, and processing of those foods that has led to pushing them over into that other so called 'discretionary' category.

So why is that important? Here's another diagram that I presented at an ILSI meeting years ago. If we look at the Australian Dietary Guidelines, again, they are predicated on the concept of a total diet based on those powerful foods that are really going to pack a punch in terms of nutritional requirements and then what we call—I've got to find another word for it, discretionary foods. It's not discretionary. It's actually unnecessary in many ways. You don't need them. Our diets are a combination of both of these types of foods. Now that's fine, if you're a healthy active person. If you're not and you need to lose weight, which most of the adult population does,

actually there isn't any room for both. So what does that mean about our food supply? And if you look at what these discretionary foods are, how can we name them? There are hundreds of them and each individual food only contributes a really small proportion. And they start in or out of our regular core food categories.

So we've got a real challenge on our hands, all of us—scientists, the food regulators, and the industry to solve this problem. What's happening in Australia, I think, is that we are eating a little bit of good food,(by looking at that map that was published in The Lancet), and eating a lot of food that is nutrient-poor, energy-rich, and we're becoming overweight. This is data from one of the trials where we looked at those categories of foods consumed by people in a weight loss trial. We had the best success with those that were eating like that because we said, "let's knock these foods out". Those people lost weight really, really well. The ones who were actually eating healthy but too much food did less well. So it shows the impact of looking at the supply of food that we're providing people with and the proportions in terms of what's available.

Finally, I just want to talk about the evidence framework for health effects of food. We have had great incursions in our knowledge and understanding of the evidence-base for healthy food. We know some of those foods, there's very strong evidence now around some of those foods and some of those nutrients that can be associated with pathways in human physiology that affect health and affect chronic disease. We can't ignore this evidence. And we can move with it. So it's actually quite exciting when you think what we can do if we really grasp the fundamentals of nutrition, not just, "Oh, we need to eat a healthy diet."

Let's move to my opinions now. That's the end of the nutrition lecture – back now to my food regulation website search. It's great to see that the regulation priorities include supporting public health objectives in relation to chronic disease risk and I noticed New South Wales has identified broader issues of public health so we are all moving in the right direction.

When I look at the food regulatory system, I see that there are actually four elements but when we look at the nutrition aspects, it's really FSANZ that carries it. FSANZ also has an excellent science program that's looking at strategic areas that you might keep in the back of your mind. I can carry on about how important collaboration is, how important scientific capacity is, but most importantly how significant data is. We need this data to make these decisions to make judgements and to move forward.

For this slide, I thank my civil engineering son, because I was sitting there preparing this and I had a spaghetti junction slide and I said: "how do I put this on a PowerPoint?". He said "Mum, you've really got to sort out your processes from your outputs," so okay. We came up with a pyramid and I thought: "how appropriate for nutrition".

This is my most important slide and it took me a bit of thinking and discussion within my family. So let's start at the pinnacle. The pinnacle is what we're all about, health protection. Now, that protection is not 'cooking the frog' to death, it's the prevention of chronic disease.

If we want to get there, first of all, we need to know what people are eating, we need dietary surveys, we need them conducted on a five-year or a ten-year basis but we need regular commitment to dietary surveys just as they have in the US. We used to have a apparent consumption data which gave us indications of where the food was disappearing, that is also useful. We need significant diet health research going on. We need that evidence-base building and we need a program of analysis of foods. We live in an innovative outstanding food manufacturing environment so we need to keep analysing our foods and keeping up with knowing what's in them. This will then deliver us food composition databases that are up to date and contemporary. It gives us an evidence analysis of diet health effects. And dietary surveys give us food intake data which is critical if we're going to make judgements. This information enables us to set standards such as nutrients reference values. We need to know what people are eating and we need to combine this with knowledge of diet health effects. We can do the health star ratings on that knowledge-base and we can do food labels and health claims on that knowledge base. Finally we can derive dietary guidelines which, amongst other things, rely on nutrient reference values. So everyone says it all depends on the dietary guidelines. That's true. They are under the pinnacle but we get there with a strong science base. This pyramid-like knowledge framework is absolutely critical.

The next point of all of this is that there are very important players in this enterprise. When our initial speaker was talking this morning, it was clear the notions of collaboration, interagency and interdisciplinary work is really important. There is the Department of Health and NHMRC, FSANZ, the ABS doing the surveys, Department of Agriculture and Water, universities, CSIRO, and the food industry. We are all important players in this. We've all got something we've got to bring to the table and work together on. But as with everything, we need to focus and if I could leave you with some take-home messages, the most important things to have on the ground as part of our infrastructure for food regulation in relation to nutrition are dietary surveys, food composition databases, nutrient reference values and dietary guidelines. We need constant committed ongoing programs in those areas.

As an academic, I did want to indulge myself in a few little methodological issues. If we look at two of the priorities I listed, there are important methodological developments that we need to keep an eye on. One is the food categorisation process, the thinking behind it and the associated analytical techniques, that is, the science behind food categorisation. The other is evidence review methodology. Here the scientific world has moved on very well and we have very good standards that the international scientific community is developing and continuing to work on. However, let me say that this is a dynamic system, when we do a system-evidence review on something, in 2010; we need to do it again in 2019. The science is rolling in all the time. We need to confirm whether our findings are still the case. We need to use this risk assessment model to work out what needs to be done. This isn't a flat-playing field. There are some areas that are low-risk, others that are potentially high-risk. So we need to manage it.

I really do think FSANZ has nailed it with the risk assessment model it uses. There needs to be oversight and review with dedicated funding. We also have to ask ourselves, "How well does this review system support food innovation? Where is the marriage there?" It needs to work. There are real issues with food categorisation; I guess the biggest one is, what is a discretionary

food? This is a real challenge for all of us. I think if we start with a responsibility to the total diet, the total food supply, we can start to identify the space that we're talking about. We need to not just work off individual foods in isolation but rather look at the significance of that particular food within a total diet model. This is behind some of the commentary on the health-star rating model arguing misalignment with the dietary guidelines which works off total diet models. These arguments reflect the methodological issues that I've raised - there will always be knots- but we need to keep working with our scientists who know about those knots and seek to improve clarity. I agree with comments made earlier. Let's not see criticism as not supporting a system, let's see it as being dynamic and engaged, which is what it should be.

In summary, for a food supply that has poor nutritional quality which ours does, we have to face it, it's very good but it's also very bad, we're slowly 'boiling the frog'. That's the health risk. That is the risk to food safety. It's not a safe food supply in relation to chronic disease risk. We need to use our comprehensive knowledge of food and its effects on health, we need to be bringing that closer together with food technology and innovation so that on the planning floor, when all the bright ideas are coming out, all of those issues are going on to the table. It's not just producing innovative food products and then chasing after it with nutrition regulation. Innovation may be disconnected from health I'm putting that to you. Is the focus more on demand? Are we more concerned about what consumers want than thinking about, "What do they need to protect their health?". We need to balance that up a little bit more. Then we need to ask does the food regulatory system support or impede food innovation? We have to keep asking ourselves that, and that's why we need to keep working together.

Overall we need a clear and stable food regulation infrastructure and I would put those four things down as essential: dietary surveys, food composition databases, nutrient reference values and dietary guidelines. We need to have a program for those to be happening on a cyclical basis, so our data, our fundamental data to make those decisions to build innovation to create regulatory tools, is based on sound science. We'll also need to - and this is a plug as an academic - have a sustained translational research capacity.

I applaud FSANZ for building it's scientist base but we also need to support the nutrition science scientists in CSIRO and universities and make sure that base is adequately supported, not just through good relationships with industry but through primary funding agencies as well such as the NHMRC and ARC. Research on food and translational research on the food-health relationship should be prioritised.

So that's my fit for purpose statement. Food regulation in Australia has a state-of-art risk analysis framework. I know this from my work and my travels and my connections at the international level. Australia is way up there in food regulation. It is focused on public health priorities so we've got it right, our heart is in the right place. We've just got to make it happen. We need to ensure bottom line support for the information needs to do this. What are people eating? What does the food contain and how much do they need of nutrients, foods and whole diets? There is also a broader context, noting another call for a National Food and Nutrition Policy. It is one way in which we can get this thinking more centralised and it requires significant funding. We need to balance our thinking between supply and demand for food, accepting

responsibility for the quality of the food supply and not just in relation to health, as other contingencies emerge. The impact of climate on food production systems will be another as will be any economic and trade changes. We need to be thinking more on food supply. We did in the war years, and we did in the depression. That's the origins of dietary guidelines. We need to do it again. And most importantly, we need nutrition input into food innovation. Thank you.