International Symposium on Food Safety
12 and 13th January 2007

Risk Communication in a Global Environment

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With increasing liberalisation of trade and freer movement of goods when it comes to trade in food we are truly living in a global village. Increasing travel by citizens for tourism, business and emigration, combined with innovative marketing, has created a demand for a broad range of diets in many countries necessitating the importation of foods and ingredients as citizens wish to experience the tastes of far off cultures in their home countries or wish for the taste of home in their new countries of residence.

Economies of scale and cheaper labour costs are giving some countries a competitive advantage in the global food market and many countries now find in more economic to import most of their food. However, free trade has to be safe trade emphasising the need for equivalent standards for all those players trading in the global market place. The longer the food chain and the more players in the food chain the more opportunities for things to go wrong or for criminal adulteration to cccur with resulting adverse health consequences for consumers. One countries problem can rapidly become another's as contaminated product and ingredients can rapidly be disseminated. No country can afford to be complacent as they are only as secure as the standards of the weakest supplier from whom they import product and a substandard domestic producer can put a nation's citizens at risk and jeopardise a country's reputation as a food exporter or in Hong Kong's case as a gourmet's paradise.

Furthermore a chronology of trade disrupting animal diseases from Food and Mouth disease to Avian flu have demonstrated that no country can claim to be immune to food scares.

A contaminant can be imported as an ingredient for animal or fish feed, as has been seen with the BSE agent and dioxin, and subsequently appear in home produced product.

In this Global Village there is no room for arrogance, food control agencies must work, and respond, together and stigmatisation of one country will only serve to fuel consumer anxiety.

Often the final product presented to the consumer can contain ingredients from several countries and many manufacturers making traceability and recall extremely difficult. For example a simple chicken kiev can have ingredients from over 15 countries

One ingredient can contaminate a range of products as happened with Chilli powder adulterated with Sudan 1 which precipitated major recalls and consumer anxiety in the UK and further afield in February and March in 2005. The recall spread to several continents and international food maker Heinz recalled product sold in China. The analytical chemists are continuously improving the limits of detection and deciding what action to take at levels of parts per billion is a major issue for risk managers but it is also a huge challenge for risk communicators trying to explain to the public that "a genotoxic carcinogen is in their food but at levels "unlikely" to do them any harm!"

If food can travel rapidly throughout the world it is nothing to the speed at which information, or miss information, can travel with global news channels, satellite TV, the internet, and SMS. Good news, or more likely bad news, can be transmitted almost instantaneously. Electronic bulletins like "Google alert" keep food safety professionals, and journalists also, abreast of the latest developments throughout the world with emerging news often complete with video clips being portrayed.

Regularly the media is ahead of the risk managers and surveillance scientists, in highlighting a problem and many public health bodies monitor the global media as part of their early warning system. Public perception is often informed by sensational news coverage and items are placed higher on the agenda of the policy makers as a result of the intensity of the media coverage of an issue.

Public concern should rightly provide input into public policy but to derive meaningful policies via this route the public require accurate information presented in an understandable format.. Herein lies the challenges for the policy makers to (1) effectively engage the public and (2) communicate risk in a two way dialogue.

Those charged with overseeing food safety have to juggle many issues including public, health, science, consumer confidence, trade and politics. Effective communicating of risk is an essential component of their work if all these issues are to be aligned.

There are many types of communication and many target audiences. Citizens in a nation's population are not an homogenous group and different messages and different channels of communication are necessary if all a nation's citizens are to be included.

There is a contrast between Crisis communication V "Peace Time" communication:- in the event of major incidents or outbreaks the approaches taken will be very different from those taken outside of a crisis but both have to be planned equally. In the past, contact

with the public was seen as a one way street but in the current information driven society food safety bodies must re-look at the way they communicate and seek a higher level of interactivity. For the media and the public. Good information and dialogue can translate into a greater understanding of the risks associated with a particular issue whether it is Avian Flu, BSE, Malachite Green or whatever.

It is often a tendency of policy makers, and politicians, to accentuate the positive and minimise the negative however the media and public hate surprises and would prefer to know exactly what you understand about the risk and what you, and they, can do to mitigate it. If an undisclosed or underestimated risk suddenly materialises the public confidence in an agency can be eroded and they wonder what else you are concealing from them. Trust can be irreparably damaged and future comprehensive pronouncements on other issues may be ignored.

In the BSE crisis in the 1990s, citizens lost confidence in their food industries' commitment to produce safe food and the regulatory and public health agencies' ability to police the industry and put public health interests foremost. Some national authorities had wrongly declared that there was no risk to public health from beef!

For journalists information is everything, it is their job to digest it and present it in a interesting fashion to the public. If an agency feeds them wrong, or misleading information, they will seek other sources.

The consequences of the BSE crisis was that public health was put at risk, consumption of beef plummeted, several governments and an EU Commission were damaged and the mechanisms for how food safety was assured were reviewed and the legal framework for food safety in the EU was simplified. BSE sensitised the EU population to food scares and left them sceptical about government reassurances or pronouncements on the safety of any aspects of the food chain. In part to combat this a range of national food safety agencies, focused on consumer protection, emerged throughout the EU and a pan-EU agency, the European Food Safety Agency, was created. Openness and transparency became the new buzzwords.

"The tendency toward panic reactions in response to catastrophic risks is something that should concern those involved in both industry and public health. The economic losses caused by overreaction, or misplaced reaction, can be huge, as can the loss of human life. For food companies it takes a lot of money to build a brand but it can be destroyed over night by a food scare or by being associated with human illness.

A risk management response is in proportion to the media coverage of the issue rather than the actual risk to human health is not the ideal. Policy-makers and regulators are not consistent in how they address risk along the food chain and in society at large. Society does not treat equivalent risks with the same degree of intervention. For example, deaths from road traffic accidents are not regarded in the same way as deaths from food poisoning and do not precipitate the same degree of media coverage and reactionary risk management

The behavioural psychologist Paul Slovic has pointed out, that risks tend to be over weighted if (i) they could lead to a catastrophic outcome (ii) they are immediate (iii) they have a dread factor-eg fatal incurable disease affecting the young, (iv) they are imposed by someone else (v) there is scientific uncertainty or (vi) they arise as a result of government incompetence. Although in the 80s Slovic used nuclear power as an example his headings could be used to explain consumer reaction to the BSE crisis in the 90s that put human health at risk and other subsequent food scares.

In fact if you wanted write a science fiction best seller of a human food scare you could do worse than have visions of human brains turning into sponges, of cows eating dead cows, a government cover up, a pan EU epidemic that goes global and an agent that the man in the street would never have heard of "a PRION" extremely difficult to destroy. You could call your novel SPONGIFORM ENCEPHALOPATHY and if you didn't make millions initially you could always have the sequel BSE in sheep.

Sadly this is not a science fiction story and the final chapters of this man made disaster have yet to be written. It is the clearest example we have of the need for honest open and transparent communication with the public. When the authorities persisted in releasing no information journalists got their stories from other sources some of whom were forecasting millions would die.

The one thing that BSE has achieved is that it has put the spotlight on the food chain. BSE contributed to the demise of both the UK Ministry of Agriculture and an EU Commission. It precipitated a review of the entire regulatory framework for the food chain throughout the EU with a new culture of openness, transparency, trust and scientific robustness emerging.

In November 2000 Germany identified its first case of BSE. Consumers had been reassured that this was a British problem so public trust in institutions was damaged and consumer confidence fell and beef consumption plummeted in Germany and other EU Member States. Ireland, which exports over 90% of the beef it produces was left with a whole cohort of prime beef animals with no market. To bring the supply demand curve back into line the EU introduced a scheme to purchase these surplus animals for destruction at a cost of over 400,000 euros. With people in the world starving to death it is hard to see good food destroyed and all because of a food scare.

Another example of poor risk management and communication was the dioxin crisis in Belgium in 1999, where a small amount of animal feed became contaminated with Dioxin. An inability to identify which farms received the contaminated feed and where in the food chain the products derived from the livestock on these farms ended up resulted in a food scare involving all Belgian eggs, meat and dairy products. The Belgian Ministers of Health and Agriculture had to resign and finally the entire Government fell. The EU banned certain products from Belgium and the US banned certain food lines from the entire EU.

In response to an EU Rapid Alert, (a mechanism by which the Commission alerts the Member States of contaminated or potentially contaminated product in circulation), the Irish Food Safety Authority withdrew Belgian chocolates from the market. Nobody asked the question "even if the chocolates are contaminated with a genotoxic carcinogen at the rate of parts per billion, how many chocolates would one have to eat to get an adverse effect?" Ironically, it subsequently turned out that the milk powder in the chocolates had been exported from Ireland to Belgium and re-imported as chocolate.

Actions of agencies should be aligned with communications, the media and the public very soon see if there is a discrepancy between the two. Good communication can highlight and reinforce an Agency's brand but it alone cannot maintain it long term. **"Actions speak louder than words".** Risk analysis in food safety includes risk assessment, risk management and risk communication. National Bodies charged with protecting the public's health from food related risk have to perform all three well if they are to be judged as effective in the eyes of the consumer.

Generally speaking, the public do not just want to listen to risk communication messages; they really want you to tell them what you are doing to control the risk and whether you have taken the risk away completely.

Communication to citizens to enable them better manage their individual risk

"The public are averse to certain perceived risks, whilst indifferent to other risks that they are exposed to which have a higher probability of occurrence. Some people are reluctant to consume genetically engineered food but have no problem clogging up their arteries with a daily dose of saturated fats. Are risks from food and the environment exaggerated or understated among the public, and do the public fear the correct types of food risks? The risk of diet-related disease is regarded differently by individuals to the risk of bacterial food poisoning, and the risk of BSE and alleged food-borne risks like Avian flu are internalized and processed differently.

While many people are happy to smoke cigarettes, the same people are often worried about acquiring BSE from beef or adverse effects of toxic fumes from incinerators. Despite much rhetoric about risk communication, little is known about how to engender more rational evaluation of risk by the individual or society at large.

A lot is spoken about the need for effective risk communication but it is extremely difficult to do well. This difficulty is well illustrated by a series of food scares over the last decade where in some cases the risk management response was more in proportion to the media coverage than the actual risk to the public's health. In other cases an understanding by the professional communicators in the media of the issues and their

ability to translate scientific language into a format comprehensible by the public has resulted in a more rational and proportionate response.

The objectives of risk communication strategies must be clearly defined and the role of the national food agencies is pivotal if appropriate risk management responses are to result from the policy makers, the food industry and the consumer.

The relationship between national agencies is key as food contaminants and food scares do not respect national boundaries and a consistent response, within and between countries, to the management of risk and the communication of risk is required if consumer health and consumer confidence is to be protected.

The European Food Safety Authority (EFSA) undertakes risk assessments on behalf of the EU. Communicating Scientific opinion across 27 member states with different languages and cultures is particularly challenging.

To achieve this EFSA collaborates with each National Agency and they customise and disseminate the messages and interact with the consumers in their jurisdictions. It is not desirable to communicate risk to consumers without telling them what is being done to mitigate risk illustrating that risk communication is a shared responsibility between the risk assessors and the risk managers.

One advantage of central risk assessment, in which the top scientists from throughout the EU participate, is that a consistent scientific view emerges. However the risk managers often have to take other factors in addition to science into consideration in deciding on a course of action. Economics, cost benefit, competing priorities etc are all taken into consideration but it is important to explain why one course of action is taken over another.

The culture of risk acceptance varies in different countries: for example, to consume unpasteurised cheese is considered a right in France, whereas it is considered undesirable in the UNITED KINGDOM. In the 27 EU member states citizens have different attitudes to food, food safety, to risk, to regulations, to compliance and to awareness campaigns.

As Chief Executive of the Food Safety Authority of Ireland between 1998 and 2003 I was naively under the impression that risk communication consisted of announcements to reassure the public in crisis situations and public awareness campaigns and that these would lead to a desired behavioural change in the public. On the contrary these, together or individually, rarely have the desired effect.

The relationship between risk perception and human behaviour is not a causal one and it is naïve to assume that simple communication, whether it is to farmers, food businesses policy makers or consumers, can deliver the desired behavioural change.

Often peoples response to genuine risks or perceived risks can be influenced by culture, societal norms, upbringing education, family, peers etc and informing people of the

potential adverse health consequences associated with inappropriate diets or alcohol consumptions patterns rarely has the desired outcome.
Increasing awareness of health and environmental risks, educating people on the detail, and changing people's attitudes and perceptions are key sequential elements on the road to behavioural change but are often not sufficient to deliver the desired outcome. A few examples include:

(1) The need for doctors to wash their hands to prevent the spread of infection in hospitals - no health professional would think this a bad idea, yet the simple measure is not always practised;
(2) Few people are unaware that recycling waste is a good thing to do and most are in favour of it, yet not everyone practises it; and
(3) Most people consider taking daily exercise is good for their health, yet although people want to do it, often other time-consuming things take priority over their health.

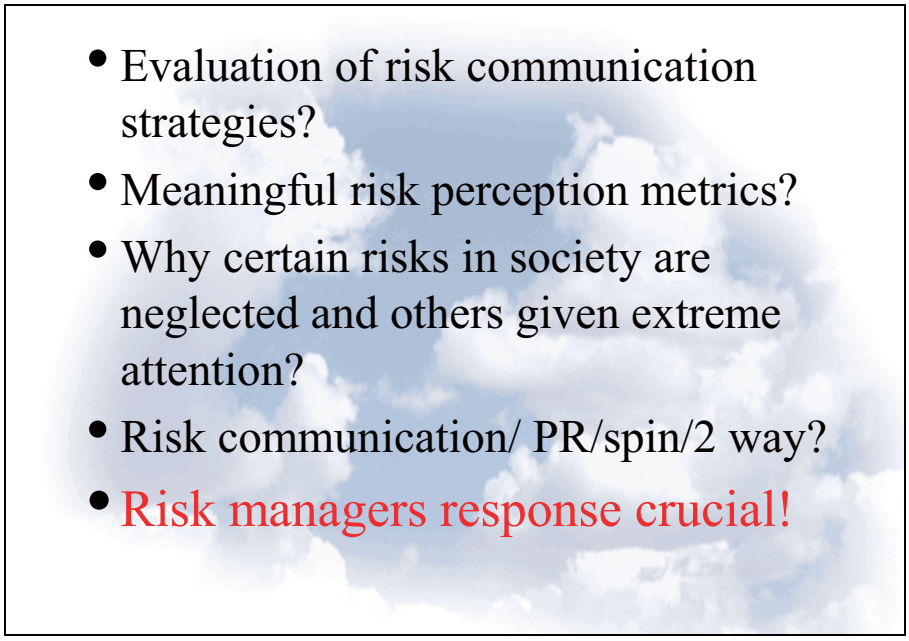
Often an attitude intention behaviour deficit exists. Community initiatives, society wide interventions, regulatory change or fiscal measures are often needed to bridge this gap. Evaluations of interventions often take place at the bottom of the pyramid "are you aware of the message" rather than at the top "did you change your behaviour".

Resources are finite and to maximize health gain, interventions should be targeted to achieve the greatest yield.

Regarding the scientific views of risks, increasingly some scientists are inclined to exaggerate the risk as "if there is no risk, there is no funding for research". Sometimes the distortion is deliberate and at other times the scientists are looking at their particular issue in isolation from all other risks society is exposed to. Risk managers and policy-makers have to prioritize the risks they address and often factors other than pure science have to be considered in determining their decisions.

The scientific risk assessment carried out on the safety of GMOs, undertaken on a case-by-case basis, in the most part concluded that there is no difference between conventional food and GMO food. But the public and professionals hold different views. The lack of any perceived benefits to the consumers has no doubt influenced the public's conclusions. Genetic engineering as a technology is delivering benefits for mankind and genetically engineered medicines and vaccines are readily accepted by the public and health professionals.

"With reference to the foot and mouth outbreak in the UK and Ireland in 2001, although this is not a human disease, the different responses in both countries contributed to a level of consumer anxiety that in no way related to the risk to human health. In Ireland, for instance, international rugby matches, horse racing and even the national St Patrick's Day Festival were cancelled and US tourists were frightened away. It was interesting to see the extent of the response mounted to prevent an animal disease impacting on trade, whereas we have never seen the same mobilisation for the control of a zoonotic agent or a human disease.



"Regarding risk communication we talk a lot about science-based assessment of risk to inform our communication strategies but often risk communications consists of crisis media releases and public awareness campaigns. We do not engage enough with the social scientists and behavioural psychologists to understand what is going on in the public mind and how they are internalising and processing the different risks.

"Finally, we rarely effectively evaluate our risk communication strategies. We evaluate the coverage and penetration of our campaigns but we do not know whether they influence the behaviour of citizens. The response of risk managers, in the regulatory agencies and in the food industry, is crucial to risk perception. If the risk managers react in an inappropriate fashion, then it is no wonder we have skewed public perceptions."

In summary the response to acute incidents has to be given in an open and transparent way, with information updated as new data emerges, by an agency that has developed trust with the media and the public in peace time and is working closely with other national and international bodies dealing with the same problem.

The response to adverse health effects due to exposure to saturated fats, trans fats, salt and sugars and an increasingly sedentary lifestyle is much more challenging and agencies need to enlist the assistance of behavioural change specialists rather than PR experts to make progress.

Engaging the public is a big challenge and in my current position in the Centre for Behaviour and Health in University College Dublin we are piloting the use of internet panels made up of members of the general public with whom we interact on a regular basis with innovative surveys. (http://geary.ucd.ie/behaviour/).

The respondents complete the surveys on line in the comfort of their own homes and algorithms link this data to STATA for immediate analysis so that output is received in timely fashion. Using vignette methodology it is possible to convert subjective self reporting on life style related issues for quantitative analysis. Also these panels enable us track opinion over time and see how fears are amplified, or placated, by different media coverage. Providing evidence for policy is what we are trying to achieve as communication to politicians and policy makers to enable them better manage societal risk is very important.

Building the agency's Brand

National food control agencies rarely can afford to assign sufficient resources for ongoing proactive communications as it is difficult to get non-sensational items into the media so often the contact time between the media and the agencies is reactive in association with crisis situations. However newsletters, websites, web fora, frequently asked questions and answers, can create an awareness of the agency's work and the issues with the media and the public and builds trust which stands an agency in good stead in the event of a crisis.

Communication across national boundaries is particularly challenging as there are differences in culture, language, risk perceptions, risk acceptance, trust in regulators, degrees of compliance etc. in addition there are different channels of communication which are more effective in one country than another eg internet, print media, TV. Radio, SMS etc. Media penetration to different subsets of the population can vary with the modality.

In the Global village we are all in this together and international bodies have produced, and are producing, guidelines to help us. The WHO Outbreak Communications Guidelines 2005 are a good starting point for outbreaks and the WHO European regional office is producing advice on risk perception and communication. The EU Rapid Alert mechanism and Infosan and other systems for sharing information are the way forward Openness and transparency has to underpin all our approaches and we must learn the lessons from BSE, Avian Flu and SARS etc so the experiences some of us have undergone help us all perform better. The requirement for ongoing training cannot be underestimated and finally I cannot over-stress the need for collaboration between agencies.

I invite you to look at the EFSA web site and to come and visit our Head quarters as you have already heard from Herman Koeter risk assessment is at the centre of our activities and risk communication permeates everything we do. We are more than happy to share any information and experience we have and look forward to interacting with agencies facing similar challenges to ourselves and the national agencies in the EU.

European Food Safety Authority

http://www.efsa.europa.eu