

Response ID ANON-UXST-XZJW-7

Submitted to **A Foodborne Illness Strategy for Scotland**

Submitted on **2016-08-12 09:52:08**

Introduction

1 What is your name?

Name:

John Bassett

2 What is your email address?

Email:

j.bassett@ifst.org

3 What is your organisation?

Organisation:

Institute of Food Science and Technology

FOODBORNE ILLNESS STRATEGY – CONSULTATION QUESTIONS

4 In your view, is the overall approach described (i.e. consideration of transmission pathways, rather than specific contaminant or commodity-focused approaches) the most appropriate to achieve the intended outcome?

YES

If you answered no, please explain briefly your reasoning, and indicate which alternative approaches you consider to be more appropriate. If you answered yes, what do you think are the key advantages of the proposed approach?:

The primary advantage should be that multiple hazards could be controlled in any given transmission pathway. Additionally, it seems correct to state that food safety is not ensured by an intervention at a single point in the transmission route as that form of control is prone to catastrophic failure. Options for control at all possible points make for a much more robust approach. However, this still leaves the problem of identifying priority transmission routes in order to obtain the best food safety result for the resourcing available, and then the points within those transmission pathways which, when controlled, would result in the best risk reduction. This would presumably require there to be some estimate as to the proportion of IID which is foodborne from any transmission pathway. Joined up thinking (i.e. including consideration of the sum of human exposures from a given transmission pathway) on IID in general is likely to deliver good public health benefits.

5 At what part of the food chain do you think FSS intervention would be most effective in protecting consumers from food safety risks?

Please explain the reason for your answer. :

Intuitively, as long as you can prevent recontamination, then as far back down the food chain as possible. However, this sort of question is best answered by producing quantitative risk assessments (as mentioned in para 15) and running "what if?" scenarios. That exercise will provide answers, or at least predictions, around the risk mitigation resulting from modelled interventions imposed on the system. Considering interventions in isolation and not linking to risk could provide misleading conclusions. These models are not trivial to produce but several have been developed in the international scientific community over the last 20 years which might be fitted with Scottish data.

6 In your view are the scope (i.e. the contaminant risks to be addressed) and framework for developing interventions and the underpinning evidence base proposed on pages 3 and 4 of the document appropriate and likely to make a positive impact on public health?

YES

Please explain the reasons for your answer. If you answered no or partly, please indicate what you would consider to be a more suitable approach.:

The hazards identified all seem reasonable and in accordance with disease data for the UK as a whole. It would make sense for all the hazards to be derived from UK foodborne disease data but taking into account any peculiarities of the Scottish foodborne disease landscape. Campylobacteriosis remains a significant issue and FSS has obviously been proactive in this arena and should be well placed to address specific Scottish nuances to the campylobacteriosis story. While raw poultry is an obvious source of exposure, the next most important exposure will be more difficult to identify and control.

7 What foodborne illness risks (contaminants or particular food production chains) do you think should be the highest priority for FSS?

Please outline briefly what you think these priorities should be and why.:

Scotland does seem to have a greater problem with STEC infections than the rest of the UK and a case could be made for giving this priority. Disease associated with this organism may be rare, but the disease is life threatening and there have been significant outbreaks in Scotland in the past (e.g. Wishaw outbreak). The control of STEC might well benefit greatly from the transmission route approach. From a trade perspective Scotland exports a lot of salmon and it may be prudent to monitor and control closely hazards such as *Listeria monocytogenes* as this organism threatens the health of Scottish people and the consumers of Scottish food alike. The primary transmission route for *Campylobacter*, i.e. raw poultry, is well established and so at least in theory able to be mitigated to some extent.

FERG data based on DALY analysis reinforce the priorities that FSS have identified. The one organism that featured in the DALY analysis and which could be worth consideration is Toxoplasma.

8 In your view what are the key partnerships that FSS will need to develop or strengthen in order to have the greatest impact on public health?

Please describe below.:

The approaches to understanding foodborne disease are changing rapidly as new technologies become available. Quantitative risk assessment is relatively new and complex to do well and so it is likely that external expertise will be needed to use this technique optimally. A much newer tool is Next Generation Sequencing (NGS) where the production of the data is (perhaps) relatively routine now, but the handling and interpretation of the data complicated. For example, how can NGS data best be used to predict antimicrobial resistance? FSS will need to have available to it the right partnerships in these fields.

9 Are there any other partnerships not mentioned in this document that you think FSS will need to consider when taking the strategy forward?

Please provide details.:

Paragraph 25 considers this fleetingly, but there are many organisations outside of Scotland and even the UK that should be partnered with. Some include EFSA, FAO, WHO, ECDC, USFDA, USFSIS.....Sharing of resources is needed to optimise public health outputs.

10 In your view, will the successful achievement of the objectives described in Figure 6 of the document enable FSS to deliver a significant reduction in foodborne illness?

YES

Please explain the reasons for your answer.:

Broadly these seem OK, but what is missing is a higher level of information being fed in to a decision making process that will prioritise which hazards/foods/transmission routes need control the most. There is more to it than in the second dot point under "at retail and catering". How will priorities be decided? Number of cases/deaths, QALYs, ability to be controlled.....?

Consideration could be given to adopting a "top down" approach based on public health data to inform risk ranking and hence priority setting.

11 In your view, are the proposals described on page 10 for monitoring the impact of the strategy appropriate?

NO

If you answered no, please could you describe suitable alternative approaches for monitoring the impact of the strategy.:

Not completely. The use of DALYs (para 32) will help better calibrate the relative importance of clinical outcomes of foodborne disease. However it is the numbers that the DALYs are multiplied by (i.e. number of cases) which are the Achilles' heel of any claim that they provide more "accurate" information.

12 Based on the suggestions in Figure 7, could you suggest appropriate performance indicators that would allow FSS to measure its success in reducing the risks of foodborne illness?

Please provide details.:

Be more specific on the use of the words "levels" to describe foodborne contaminants. Often in risk assessments a distinction is drawn between the concentration of a hazard in a food and its prevalence. Of course they are two sides of the same coin, but with testing in place as it is, which is more important-reducing the concentration in positive samples, or reducing the prevalence of positive samples?

It would be worth considering obtaining a more targeted and proactive picture of foodborne disease in Scotland, as Figure 7 indicates the use of only "reported" incidence. Relying on reported disease is always going to give an underestimate, likely biased to under-report diseases with less severe outcomes (as people who are really sick will be more likely to attend a GP). The IID study in the UK is useful as a focused and detailed set of data, although there were some unexpected findings (e.g. the extent of sapovirus infections). Surveillance systems need to be optimised to provide a more "accurate" picture of foodborne disease described in the text. Ultimately it is the incidence of foodborne disease that is the primary measure or some more integrated measure such as DALYs, YLL etc.

"Measures of business compliance" need to be risk-based and clearly linked to the evidence around food safety outcomes, i.e. illnesses and incidents.

13 Do you consider that there are important evidence gaps that will need to be addressed to enable FSS to deliver its aim to reduce the risks of foodborne illness in Scotland?

YES

If you answered yes, please outline briefly what you consider to be the key evidence that is needed to support FSS in identifying interventions for reducing foodborne illness risks in Scotland.:

This is hard to answer without knowing all of the evidence sources available to FSS but dose response data are perennially in short supply (probably not specific to the Scottish population), distributions of pathogen concentrations in foods and multiplication factors to account for under-reporting of foodborne disease (both of which may be specific for Scotland). A clearer picture would emerge after systematic analyses of transmission routes and production of risk models.

14 Do you agree that the proposals outlined in this document are complementary to wider FSS strategy on food safety?

Please describe below.:

Yes

15 Is your work relevant to the aims of this strategy and if so, do you feel you could contribute to the delivery of our key objectives for reducing the risks of foodborne illness?

YES

If you answered yes please could you describe how you could work with FSS to help us to achieve our objectives.:

Institute of Food Science & Technology (IFST) is the leading qualifying body for food professionals in Europe and the only professional body in the UK concerned with all aspects of food science and technology. Our membership comprises individuals from a wide range of backgrounds, from students to experts, working across all aspects of food science and technology, and from academia through to enforcement.

The aim of IFST (<http://www.ifst.org/about-ifst>) is to promote the advancement and application of food science and technology for the benefit, safety and health of the public.

Or mission...

To act as the voice of the profession by:

- Facilitating the development and sharing of knowledge underlying food science and technology and its application;
- Providing an independent, representative and responsive voice on food science and technology issues on behalf of those working in the sector – whether in academia, business, education, research or Government Departments and Agencies
- Establishing, promoting and advancing professional development and professional standards and ethics for those working in any way within the field of food science and technology;
- Encouraging the highest calibre new entrants to the sector through the promotion of food science and technology as an exciting, worthwhile and aspirational career path.

Specifically, IFST maintains a register of food safety professionals (<http://www.ifst.org/professional-recognition>) with designations as below:

Registered Food Safety Principal
Registered Food Safety Manager
Registered Food Safety Practitioner
Registered Food Safety Technician

This constitutes a resource that FSS could avail itself of in the future when seeking expert advice on food safety.