

Developing a new Foodborne Illness Strategy for Scotland

1 Purpose

- 1.1 This paper is for **discussion and agreement**.
- 1.2 The Food Standards Scotland (FSS) Strategy and Corporate Plan includes the development of a Foodborne Illness Strategy for Scotland as a key activity for delivering our objectives under Strategic Outcome One – Food is Safe. In order to take this forward, a high level proposal has been drafted to set out an over-arching framework which will allow FSS to develop, implement and evaluate programmes of work aimed at improving the safety of food produced and sold in Scotland and reducing the risks of foodborne illness to the Scottish population.
- 1.3 The purpose of this paper is to seek views from the Board on the draft strategy, and to provide an overview of feedback received from FSS staff and external stakeholders following a consultation exercise that was undertaken between June and August 2016.
- 1.4 The Board is asked to:
 - **Discuss and provide comments** on the proposed framework of the strategy, particularly in the context of feedback received from the consultation;
 - **Note** the priority workstreams aimed at delivering the foodborne illness strategy over the next 5 years;
 - **Agree** how progress in delivering the strategy should be reported;
 - **Note** that the Board will be asked to sign off the final strategy later this year.

2 Strategic Aims

- 2.1 The development and implementation of a Foodborne Illness Strategy supports FSS Strategic Outcome 1 – Food is safe, and is a key activity which FSS has committed to in its Corporate Plan to 2019.

3 Background

- 3.1 The Board received the draft strategy document when it was issued for consultation on 16 June 2016. This is provided at Annex 1. Key themes identified from the consultation exercise are summarised in Annex 2. The Executive intends to use these themes as the basis for developing priority workstreams to deliver the strategy over the next 5 years.

4 Discussion

- 4.1 The Foodborne Illness Strategy aims to target the key pathways that are responsible for the transmission of microbiological, chemical and radiological risks throughout the food chain. It will build on existing programmes of work developed by the Food Standards Agency in Scotland (FSAS) to deliver UK wide food safety strategies in Scotland. Our new strategy proposes a slightly

different approach to those previously taken forward by FSAS which were either designed around individual food commodities, or focussed on control measures for specific contaminants. The proposed framework allows contamination risks to be viewed in a more holistic manner; and aims to support the identification of key transmission pathways, and appropriate points within these pathways, at which interventions are likely to have the greatest potential for preventing or controlling contamination of the food chain and reducing the risks to human health.

- 4.2 This approach is entirely consistent with the Board's preference for FSS to follow internationally accepted convention for separating risk assessment from risk management. The proposed framework offers a logical and systematic means of identifying and articulating risks, thus enabling a more focused approach to risk management. By setting foodborne transmission in the context of other pathways which can result in humans being exposed to contaminants, this strategy recognises that food production cannot be viewed in isolation. Achieving measurable improvements in public health will be reliant on the development of approaches for addressing contaminant risks at source and preventing transmission throughout the environment and the food chain.
- 4.3 This framework will also support FSS's regulatory strategy by promoting a better understanding, by food businesses, of the contamination sources and transmission pathways which are relevant to their products and implications for food safety management. A stronger focus on sources and environmental transmission is also needed to ensure the strategy takes account of wider issues such as antimicrobial resistance and the potential impact of future changes in climate and agricultural practice on risks to the food chain.
- 4.4 Effective collaborative working will be key to defining and delivering our work to reduce foodborne illness, and to influence those responsible for managing and regulating other pathways which can impact on the food chain. Therefore a key feature of our strategy will be to strengthen our relationships with FSA, across Scottish Government and with the food industry to identify intervention approaches which are feasible, proportionate, and capable of effecting positive public health outcomes.

5 External Consultation and Staff Engagement

- 5.1 Our Foodborne Illness Strategy has been in development over the past 12 months, and throughout this period we have discussed our proposals with a number of key stakeholders, including the FSA. The draft Strategy was issued for public consultation between 16th June and 23rd August 2016, which generated 25 responses from stakeholders representing Public and Environmental Health bodies, the food industry, consumers, scientists, and international regulators. A staff workshop was also held on 24 August to seek views from FSS policy, science, communications and operations teams with responsibility for food safety.
- 5.2 This programme of engagement has generated extremely useful feedback on the framework and scope of the strategy, which is described in more detail at Annex 2. Overall, the responses to the consultation were extremely positive,

with the majority of stakeholders supportive of our proposal to design the strategy around a transmission pathway framework as a means of identifying where interventions are likely to have the greatest impact. All consultees considered that successful achievement of our objectives would be either fully or partially effective in delivering a reduction in foodborne illness in Scotland.

5.3 The consultation responses identified a number of common themes regarding how FSS should deliver the strategy, which are summarised below. These themes will form the basis of our programme of work for delivering the strategy over the next 5 years:

i) **Development of a robust risk governance framework** underpinned by informed and transparent risk assessment to identify priority contaminants and areas of food production where FSS can make a positive impact; ensuring interventions are evidence based and aligned with regulatory strategy;

ii) **A science and evidence programme** aimed at understanding the key sources, transmission pathways and impacts of foodborne illness in Scotland, and developing ways of supporting producers and consumers in managing the risks;

iii) **Effective collaboration with stakeholders at all parts of the food chain**, with a renewed focus on partnership working to address contaminant sources and environmental transmission;

iv) **Development of communication and consumer engagement activities** to raise awareness of foodborne illness risks and how to avoid them. This will include campaigns aimed at ensuring Scottish businesses understand food safety management requirements, targeted marketing activities informed by consumer research, and initiatives for promoting the strategy in schools and communities.

6 Delivering the Strategy

6.1 A project plan will be developed to deliver the strategy, which will outline key initiatives and evidence requirements over the next 5 years, timescales for delivery, and resource requirements. The Foodborne Illness Strategy will be delivered in unison with FSS Strategies on Regulatory Policy, Science and Evidence, and Communications, and will inform the development of our forthcoming Food Surveillance Strategy which will be presented to the Board in February 2017.

6.2 The project plan will be reviewed on an annual basis and priorities re-evaluated in light of risk assessment and emerging evidence.

7 Performance Reporting

7.1 The development and delivery of a foodborne illness strategy which focusses on prevention and action to protect consumers is a key priority for FSS and it

will be necessary to monitor our performance in this area on an on-going basis. Appropriate performance indicators for this strategy will be considered as part of a wider project being taken forward by the Board and Executive on Outcomes Based Reporting, and are likely to be based on a model presented to the Board in March 2016. This is included at Annex 3 of this paper.

8 Finalising the Strategy

8.1 The draft strategy will be amended to take account of comments received through the consultation process and Board discussion. It will then be circulated to the Board for final sign-off, with a view to publishing the finalised strategy by the end of 2016.

9 Conclusion

9.1 The Board is asked to:

- **Discuss and provide comments** on the proposed framework of the strategy, particularly in the context of feedback received from the consultation;
- **Note** the priority workstreams aimed at delivering the foodborne illness strategy over the next 5 years;
- **Agree** how progress in delivering the strategy should be reported;
- **Note** that the Board will be asked to sign off the final strategy later this year.

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Annex 1 – Draft Foodborne Illness Strategy for Scotland

Annex 2 - External Consultation and Staff Engagement

A. Respondents to the public consultation

Public and Environmental Health	Scientific Community	Regulatory Bodies	Industry Bodies	Consumer Representatives
Dundee City Council	Centre for Environment, Fisheries and Aquaculture Science	Netherlands Food and Consumer Product Safety Authority	Apetito Ltd	Which?
Fife Council	Fera Science Ltd	New Zealand Ministry for Primary Industries	British Hospitality Association	
Glasgow City Council	Institute of Food Science and Technology	US Department of Agriculture (Agricultural Research Service)	Quality Meat Scotland	
Health Protection Scotland	James Hutton Institute		Scottish Association of Meat Wholesalers	
Moray Council	Moredun Research Institute		Seafish	
National Services Scotland (NHS)	Scottish Microbiology Reference Laboratories			
NHS Western Isles	University of Aberdeen			
Royal Environmental Health Institute of Scotland	University of Edinburgh			

B. Summary of feedback from stakeholder consultation and staff engagement

Framework and scope of the strategy

- Overall strong support for the overall approach (22 out of 25 responses), with the transmission pathway framework considered to complement the 'One Health' concept and a positive step forward compared to previous approaches for addressing foodborne illness;
- Consultees considered that successful achievement of the objectives described in Figure 6 of the strategy document would be successful (12 out of 25 responses), or partially successful (12 out of 25 responses) in delivering a significant reduction in foodborne illness (1 consultee did not respond to this question);
- Consultees considered that the scope of the strategy (contaminant risks and proposals for developing interventions and generating underpinning evidence) to be either fully (12 out of 25 responses) or partially (11 out of 25 responses) appropriate (2 consultees did not respond to this question);
- Consultees highlighted the need to articulate priorities for chemical safety of the food chain, including pesticides and veterinary residues in addition to environmental and process contaminants;
- It was considered that whilst microbiological risks associated with *Campylobacter*, Shigatoxin producing *E. coli* (STEC), *Listeria monocytogenes* and foodborne viruses should continue to be a key focus, it is important that the strategy also takes account of protozoan pathogens (including Cryptosporidia and Toxoplasma), and continues to review the uncertainties associated with prion diseases;
- Antimicrobial resistance (AMR) was highlighted as an important consideration for the strategy and an area which merits a defined programme of work.

Delivering the strategy – identifying risks and appropriate interventions

- There is a need to strike an appropriate balance between interventions targeted to foods consumed in Scotland (including imported products and those processed outwith Scotland), and those which are aimed at improving the safety of foods produced in Scotland (including the export market);

8. Delivery will be dependent on a robust risk governance framework, underpinned by evidence from research, surveillance, enforcement activity, incidents, and consumer engagement to assess where intervention can have the greatest impact; evaluate costs, benefits and acceptability; and identify the potential for unintended consequences;
9. There is a need for food safety interventions to be aligned with regulatory strategy – ensuring food safety enforcement is robust and that FSS supports the food industry in Scotland (particularly SMEs) in understanding the risks and how to control them;
10. The strategy needs to place greater focus on emerging risks to the food chain resulting from factors such as climate change and new food technologies.

Science and evidence requirements

11. Research to elucidate the burden of foodborne illness in Scotland and understand the consumption habits and behaviours of Scottish consumers which are placing them at the greatest risk;
12. A defined food surveillance strategy to understand the prevalence of contaminants (including antimicrobial resistant microorganisms) in the food chain and the risks associated with foods produced in Scotland compared with imported products;
13. Research to understand chemical contaminant risks associated with the Scottish diet and food production systems;
14. Continued focus on the application of next generation sequencing approaches to improve understanding of the contribution of foodborne and environmental transmission pathways to human illness;
15. Use of social science research to identify the most effective means of communicating food safety messaging through marketing and educational activities;
16. On-going consumer engagement activities to assess the acceptability and appropriate balance of interventions and measures to mitigate risks;
17. Improved use of FSS data and identification of other sources of intelligence and data which can be used to underpin the strategy;
18. Development of appropriate performance measures capable of evaluating impact.

Key partnerships

19. Effective collaboration with FSA and international food bodies should be prioritised to ensure that the strategy is not taken forward in a parochial way;
20. It will be particularly important for FSS to engage effectively with EU producer groups, reference laboratories and EU regulators to ensure the strategy takes full account of Brexit implications;
21. FSS should improve collaboration with the primary production sector and bodies involved in environmental protection to identify where interventions can address contaminants at source;
22. Partnerships with veterinary agencies will be key in the development of an integrated 'One Health' approach to surveillance, intelligence, research and communication;
23. The strategy provides an opportunity for FSS to promote the role of Local Authorities in the control of foodborne illness risks and delivering objectives relating to Scottish Government outcomes on health and inequalities;
24. The strategy should be actively promoted through FSS engagement with retailers, trade associations and accreditation/assurance bodies and food safety training providers;
25. FSS should give greater focus to engagement with school level educators to develop innovative ways of promoting the knowledge and skills of children and young adults which can be transferred to the home and workplace;
26. There is scope for FSS to develop stronger links with voluntary and charitable organisations, community groups, and health practitioners (including GPs, midwives and pharmacists) in order to ensure the strategy is promoted at community level and takes account of the needs of vulnerable individuals;
27. In taking forward the strategy, FSS will have an important role to play in promoting collaboration between academia, research institutes (including the Scottish Government Research Providers), and public sector laboratories to ensure there is resilient scientific expertise and analytical provision in Scotland to investigate incidents, address evidence gaps and underpin interventions.

Annex 3 – Draft performance dashboard for reporting progress

INDICATOR: REDUCE THE RISKS OF CONTAMINANTS IN THE FOOD CHAIN AND THE TRANSMISSION OF FOODBORNE ILLNESS IN SCOTLAND

CURRENT STATUS

Evidence suggests that there is a need for more targeted action to reduce the risks of foodborne illness in Scotland. The number of reported cases of infectious intestinal disease has remained relatively stable over the past 5 years, and there is no evidence to suggest that the risks of foodborne transmission have decreased.

The number of food incidents and outbreaks reported to FSS suggests that there is an on-going need for interventions to reduce the transmission of contaminants in the foodchain.

WHY IS THIS INDICATOR IMPORTANT?

Contaminated food poses a significant risk to public health in Scotland. The true impact is difficult to quantify, but foodborne disease caused by pathogenic microorganisms is estimated to affect 43,000 people in Scotland annually, with approximately 5,800 cases reporting to general practice and 500 requiring hospital treatment.

HOW CAN FOOD STANDARDS SCOTLAND INFLUENCE THIS INDICATOR?

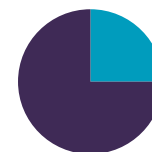
Humans can be exposed to microbiological and chemical contaminants through a range of different transmission pathways. The role of FSS is to develop intervention strategies which minimise the transmission of contaminants via the foodchain, and to provide consumers with the knowledge required to store, prepare and cook food safely. In light of the contribution of different transmission routes on public health outcomes, multidisciplinary approaches are required involving effective collaboration between FSS, government, local authority and industry partners

KEY ACTIVITIES

- i) **Development of a robust risk governance framework** underpinned by informed and transparent risk assessment to identify priority contaminants and areas of food production where FSS can make a positive impact; ensuring interventions are evidence based and aligned with regulatory strategy;
- ii) **A science and evidence programme** aimed at understanding the key sources, transmission pathways and impacts of foodborne illness in Scotland, and developing ways of supporting producers and consumers in managing the risks;
- iii) **Effective collaboration with stakeholders at all parts of the food chain**, with a renewed focus on partnership working to address contaminant sources and environmental transmission;
- iv) **Development of communication and consumer engagement activities** to raise awareness of foodborne illness risks and how to avoid them. This will include campaigns aimed at ensuring Scottish businesses understand food safety management requirements, targeted marketing activities informed by consumer research, and initiatives for promoting the strategy in schools and at community level.

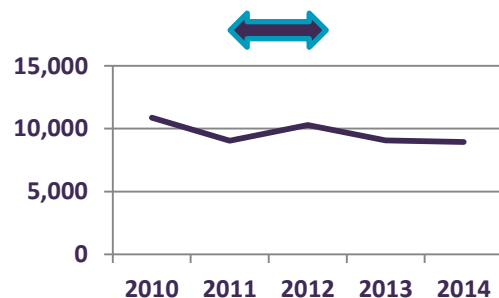
KEY MILESTONES

Milestone 1 -Development of a foodborne illness strategy for Scotland



- Draft strategy consulted on between June-August 2016
- Presented to FSS Board in October 2016
- Publication in December 2016
- Implementation of project plan in January 2017

Performance measure 1 Reported cases of infectious intestinal disease



Performance measure 2 Risks to the foodchain

- 73% of fresh chickens on retail sale contaminated with Campylobacter
- 60-80% of human Campylobacter infection in Scotland attributable to a chicken source
- 10% of local authority food samples non-compliant with legislation
- x incidents reported in Scotland attributed to microbiological and chemical contaminants

Performance measure 3 Delivery of key outputs during Q1

- A report on the attribution of Campylobacter infection in Scotland
- Initiated a research programme to assess the contribution of Scottish chicken to Campylobacter infection
- Developed a programme of work to understand STEC risks in Scottish red meat production
- Website tools on the control of microbiological risks in the smoked fish and fresh produce sectors