

**MINUTES OF THE EIGHTY-THIRD MEETING OF THE ADVISORY
COMMITTEE ON THE MICROBIOLOGICAL SAFETY OF FOOD HELD ON
26 JUNE 2014 IN AVIATION HOUSE, LONDON AT 1.00PM**

Present

Chair: Professor Sarah O'Brien

Members: Professor Bob Adak
Dr Gary Barker
Dr Roy Betts
Mrs Vivianne Buller
Professor John Coia
Mrs Rosie Glazebrook
Professor Rick Holliman
Ms Jenny Hopwood
Professor Peter McClure
Dr Sally Millership
Mr David Nuttall
Dr Dan Tucker

Departmental representatives: Ms Ruth Parry (DH)

Secretariat: Dr Paul Cook (Scientific Secretary)
Mr Adekunle Adeoye
Ms Sarah Butler

Presenters: Ms Helen Atkinson
Ms Tanya Cheney (AHVLA)
Dr Wendy Wills (University of Hertfordshire)

Members of the public – see Annex 1

1. Chair's Introduction

1.1 The Chair welcomed Members and members of the public to the 83rd meeting of the Committee. She introduced Helen Atkinson (Food Standards Agency; Social Science Research Unit) and Dr Wendy Wills (Reader in Food and Public Health, Centre for Research in Primary and Community Care, University of Hertfordshire), who would present agenda item 6. She also welcomed Ms Tanya Cheney (Animal Health and Veterinary Laboratories Agency) who would

present the results of the UK-wide microbiological monitoring programme of slaughter pigs at agenda item 8.

- 1.2 The Chair welcomed two new Members: Prof Peter McClure who had been appointed to the Committee to provide expertise in microbiological risks and food processing, and Dr Dan Tucker, appointed to provide expertise in veterinary public health. She invited them to say a few words about themselves and the other members to introduce themselves.
- 1.3 The Chair informed Members that Ms Geraldine Hoad would be leaving the Food Standards Agency shortly, and thanked her very much for her work in support of the Committee as Administrative Secretary. In the short term Dr Paul Cook would be covering the Administrative as well as the Scientific Secretary role.

2. Apologies for absence

- 2.1 Apologies for absence were received from Prof David McDowell, Mrs Jenny Morris, Joy Dobbs, Stephen Wyllie and Javier Dominguez.

3. Declarations of interest

- 3.1 The Chair reminded Members of the need to declare any conflicts of interest relating to items on the agenda. She declared an interest in the IID2 attribution study as the lead contractor and Prof Holliman would be chairing that item. Prof Coia declared that he undertook consultancy work for Tesco.

4. Minutes of the 82nd meeting

- 4.1 The Chair asked Members if they wished to make any amendments to the minutes of the last meeting. Members identified some repetitious wording that could be removed in paragraph 9.3. Apart from this, the minutes were agreed as a correct record of the 82nd meeting.

5. Matters arising (ACM/1147)

- 5.1 Dr Cook drew Members' attention to the summary of actions taken on matters arising from the last meeting. Work was still in progress on the following items:
 - The risk assessment on *Mycobacterium bovis* in meat was to be restructured and would be re-submitted to the Committee at a future meeting.
 - An amended version of Update on viruses in the food chain (amendments made as a result of the public consultation) together with the comments from the public consultation would be considered by the Committee at the October 2014 meeting.

6. Domestic Kitchen Practices: Findings from the Kitchen Life Study (ACM/1148)

- 6.1 The Committee at its October 2013 meeting requested a presentation on the outcome of the Kitchen Life Study (insight into foodborne disease risk from domestic kitchen practices). Helen Atkinson (FSA SSRU) and Dr Wendy Wills (University of Hertfordshire) were invited to present the findings of the Study. Helen provided background to the work. She reported that Kitchen Life is part of a package of the FSA's research on domestic practice that has its roots in the work ACMSF and SSRC had carried out on the increased incidence of listeriosis in the UK. Members were informed that SSRC was happy to present the Committee with the findings of the other studies being carried out under the FSA's research on domestic practices.
- 6.2 Dr Wendy Wills (project lead for Kitchen life) presented the findings of the study. She reported that work was commissioned by the FSA in 2011 to examine food-safety behaviours in the home, focusing on actual rather than reported behaviours and to complement the findings from other studies. It involved a team of social scientists with various backgrounds from University of Hertfordshire. The objectives of the study were outlined. The study employed a qualitative methodology using an ethnographic¹ approach. 20 households (respondents from the 2010 Food and You Survey) were recruited as case studies to investigate the kitchen lives of ordinary people. The case study households were from across the UK (10 including people aged 60+ years; 10 including people <60 years).
- 6.3 The study revealed that the kitchen was not a neatly bounded space or room reserved exclusively for practices relating to food work. Kitchens in the study were spaces in which different aspects of domestic life took place.
- 6.4 Dr Wills reported that food-related and non-food related elements of kitchen practices were entangled; practices incorporated multiple activities, things, people and places inside and outside the home and these flowed flawlessly together.
- 6.5 Members were informed that the study came up with the phrase 'logics and principles' as a term relating to the 'rules of thumb' drawn on by participants. Households employed 'rules of thumb' about 'how things are done' and these were inconsistently drawn on by participants in the study, particularly in relation to washing meat, poultry and fish; and salad and vegetables.
- 6.6 Dr Wills summarised the findings by explaining that bringing to life contemporary kitchens, through a 'close-up' examination of practices, the *Kitchen Life* project provides insights that could be useful in the FSA's efforts to support effective food safety practices in the home. A key finding from the study suggested that older people, in particular, might be at risk of harm from foodborne illness because there are more factors working against them than in other household types. She added that the study together with evidence from

¹ Ethnography is the systematic study of people and cultures

other FSA funded research suggests some new ways of thinking about risk and about the failure of consumers to adhere to recommended practices.

- 6.7 The Chair invited comments and questions on the presentation. The following points were made in discussions.
- 6.8 A member queried the robustness of the study's observations highlighting that a sample size of 20 households was not representative of the UK population. It was pointed out that there may be significant differences in the study's findings if other factors (such as geography, ethnicity, social economic class etc.) which were not looked at when the 20 households were selected are considered. Dr Wills confirmed that although the above factors should be taken into account when carrying out qualitative studies, the work was not designed to be representative of the UK population or representative of a subset of the population. She explained that the small sample size used provides valuable insight on the kitchen practices of ordinary households in the UK. Dr Wills agreed that there was the possibility of getting a different outcome if an identical study was carried out on another set of ordinary households.
- 6.9 Concerning findings of the study in relation to events that can trigger training/ education on good kitchen practices, a member asked if there would be opportunities for training children. Dr Wills commented that the report recognised that kitchens were often not under the control of one person and acknowledged the importance of getting the message across/influencing children from a very young age. The report findings suggested that children often start to develop differentiated practices from a very young age.
- 6.10 There was a request for additional information on the subject of house logics and principles, in particular on where the households learnt their "rules of thumb" in relation to food safety. Dr Wills explained that it was difficult to unpack what influences people's "rules of thumb" as the findings showed how these were inconsistently drawn on by households, particularly in relation to washing meat, poultry, fish, salad and vegetables. Dr Wills added that the study report listed the various sources of information households indicated they go to for advice.
- 6.11 A member drew attention to one of the objectives of the study "What relationships exist between what people do and say and the kitchen space/place?" and asked if the study was able gauge how much the participants were willing say compared to what they actually did. Dr Wills replied that the study noted that there were a few inconsistencies in some responses when questions that had been previously asked were reworded and asked again.
- 6.12 As the ACMSF report on *Listeria* in part triggered the study, had it identified practices by the elderly contributing to the increased incidence of listeriosis? Dr Wills responded that it was a shifting way of life in the over 60s that may expose them to foodborne infections e.g. a man who had done no cooking all his life having to take responsibility for feeding himself in the absence of his wife.

- 6.13 There was discussion on how the kitchen was cleaned. Dr Wills remarked that the study noted the various methods used for cleaning the kitchen, which included using wet cloths, wet cloths with antibacterial material and dry kitchen roll. The study revealed that most people used a wet cloth and no antibacterial material.
- 6.14 The Chair read out Joy Dobbs (SSRC Deputy Chair) written comments on this study. Joy Dobbs indicated that the study was interesting because of the real life case studies and the enlightening interaction between pets and households.
- 6.15 The Committee welcomed the presentation and agreed that it provided useful insight into how the domestic kitchen functions. Members accepted Miss Atkinson's offer to present Wave 3 of the Food and You Survey results at a future meeting.

7. Infectious Intestinal Disease 2 attribution study (ACM/1149)

- 7.1 Prof Rick Holliman took the Chair for this item. He invited Prof O'Brien in her role as the lead contractor from the University of Liverpool to present the findings of research which was an extension of the IID2 Study. It had incorporated contemporary data from that study with outbreak data together with findings from a systematic literature review.
- 7.2 Prof O'Brien informed members that although the study had not yet appeared in any peer reviewed literature, it had been through 12 international reviewers during the course of the research.
- 7.3 The IID2 study published in 2011 had estimated the burden of illness from infectious intestinal disease in the community in the UK as affecting around 1 in 4 of the population each year. The objective of the extension study was to determine the amount of diarrhoeal illness that was foodborne, and that had been acquired in the UK. The study also estimated the burden of disease caused by contaminated food commodities using a point-of-consumption attribution model.
- 7.4 Prof O'Brien outlined the data sources and modelling approaches used in the study. The first stage had been a systematic review of peer-reviewed literature over 10 years including studies that reported the proportion of human cases attributable to different risk factors, and studies that attempted to attribute human cases to different sources/food vehicles, for example expert elicitation, use of outbreak data, and molecular methods. Additional sources of data were the IID1 and IID2 studies, and outbreak data.
- 7.5 Two modelling approaches were used: Monte Carlo simulation and a Bayesian approach. There was correlation between the 2 methods, although Prof O'Brien stressed that for all the pathogens statistical confidence intervals were wide, particularly for *E. coli* O157. She explained that the study was confined to 13 known foodborne pathogens.
- 7.6 Prof O'Brien gave an overview of the key results of the study. In the community *Campylobacter* was the most common foodborne pathogen (approximately

280,000 cases) followed by *Clostridium perfringens* (approximately 80,000 cases) and norovirus (74,000 cases).

- 7.7 In primary care *Campylobacter* was the most important cause of GP consultations. *Salmonella* and *E. coli* O157 were found to be the most important cause of hospital admissions.
- 7.8 In order to estimate the burden of foodborne disease caused by contaminated food commodities 3 data sources were used: attribution studies identified from the systematic literature review, outbreak datasets from national surveillance centres and consumption data from the National Diet and Nutrition Survey. The method published by John Painter in the USA was used to classify the food commodities. Prof O'Brien explained that "complex foods" was a category used for dishes containing several ingredients which could have been a cause of illness.
- 7.9 She highlighted the findings of this part of the study which estimated that 51% of cases of foodborne illness in the community were attributed to poultry, 10% to complex and other foods, 10% to produce and 6% to seafood. For hospital admission cases 32% were attributed to eggs. Using consumption data, the estimated rate (per 1,000/year) of foodborne illness was calculated for cases in the community, primary care, and hospital admissions.
- 7.10 Prof O'Brien clarified the strengths and the limitations of the study which included the fact that it was not possible to distinguish between illness resulting from consumption of foods and subsequent person-to-person spread. It was also not possible to distinguish between UK and imported food, or between food prepared at home and food eaten out. However, even taking into account the various uncertainties, *Campylobacter* remained the most common foodborne pathogen in the UK, followed by *Clostridium perfringens*, norovirus and *Salmonella*. As far as food commodities were concerned, contaminated poultry was found to be the most common contributor of foodborne illness but other important food vehicles included beef, lamb, eggs, seafood and produce. "Produce" included salad vegetables, cooked vegetables, fruit, nuts, seeds (including sprouting seeds), produce dishes, almonds, halva, nuts/dry fruits, peanut butter, peanuts, sesame seed and tahini.

Members were invited to comment on the attribution study.

- 7.11 Members commented that as the study confirmed *Campylobacter* in chicken as the main foodborne challenge. It was acknowledged that chicken came in different forms such as processed, chilled, frozen, and was used in various types of dish and this merited further investigation as well as being able to distinguish between UK and imported chicken. There was also a lack of information on how much illness was caused by behaviours in the home and attributable to food eaten away from home.
- 7.12 In answer to a question about direct hospital admissions as opposed to people going to their GP in the first place, Prof O'Brien confirmed that the further work was being done on hospital episode statistics by the FSA.
- 7.13 A member asked if there was further information that could be collected when outbreaks were investigated which would help in this kind of study. Prof

O'Brien said there were ways that data capture could be improved and one of these would be if there was a standard way of reporting outbreaks and sporadic illness on a national basis.

- 7.14 Members commented that the levels of illness attributed to *Clostridium perfringens* were higher than expected. Prof O'Brien replied that this pathogen had been looked for systematically in the IID2 study using both traditional and molecular methods and she surmised that it may not feature in national surveillance data because it does not commonly present to primary care.
- 7.15 A member commented on the possibility of comparing the results of the study with the prevalence of pathogens in animals at the food production level. Another member said that it was surprising that despite the levels of *Salmonella* found in pigs there were not more cases of *Salmonella* in pork although cases of illness had increased with the advent of hog roasts.
- 7.16 Prof Holliman thanked Prof O'Brien for her presentation of a study which gave the UK a unique position in the amount of timely evidence available on which to base future research and surveillance and in prioritising effective interventions to reduce food poisoning.

8. *Salmonella*, *Toxoplasma*, Hepatitis E virus, *Yersinia*, Porcine Reproductive and Respiratory Syndrome virus, *Campylobacter* and Antimicrobial Resistance and ESBL *E. coli* in UK pigs at slaughter (ACM/1150)

- 8.1 Miss Tanya Cheney (Animal Health and Veterinary Laboratories Agency) was invited to present the findings of the baseline survey of pigs at slaughter. The survey was a monitoring programme of *Salmonella*, *Toxoplasma*, Hepatitis E virus (HEV), *Yersinia*, Porcine Reproductive and Respiratory Syndrome virus (PRRSv), *Campylobacter* and Antimicrobial Resistance (AMR) and Extended Spectrum Beta Lactamase (ESBL) *E. coli* in UK pigs at slaughter. The study was a collaborative and multi-funded project involving Defra, Veterinary Medicines Directorate (VMD), FSA, Public Health England (PHE), Public Health Wales (PHW), Scottish and Welsh Governments, Department of Agriculture and Rural Development Northern Ireland and the British Pig Executive. Miss Cheney reported that a total of 645 pig carcasses were randomly selected and sampled for the above pathogens at the fourteen largest capacity slaughterhouses in the UK. Sampling was between January and May 2013. Study design was consistent with previous baseline surveys (Commission Decision 2006/668/EC).

Salmonella

- 8.2 Prevalence of *Salmonella* in the caecal samples was 30.5% (a statistically significant rise from 22% in the 2006/7 UK baseline survey), prevalence in the carcass swab samples was 9.6% (a statistically significant decrease from 15% in 2006/7 survey) and levels in rectal swab was 24%. The emerging serovars which may partly be responsible for the overall increase in *Salmonella* prevalence were highlighted.

Toxoplasma

8.3 Seroprevalence of *Toxoplasma* was 7.4%. This was the first UK-wide seropositive estimate for *Toxoplasma* in pigs and was similar to other EU countries. Heart and tongue tissues were retained by Public Health Wales.

Yersinia spp

8.4 Prevalence of *Yersinia* was 32.9% for tonsil samples, and the prevalence in the carcass swab samples was 1.9%. More than a quarter of pigs were found to carry *Y. enterocolitica* but there was a low level of carcass contamination of 1.9% which suggests a small risk to consumers. This was the first UK wide survey for *Yersinia* in pigs.

Hepatitis E

8.5 Seroprevalence of Hepatitis E virus was 92.8%. Prevalence of infection defined by the presence of detectable plasma HEV RNA was 5.8% (with around 1% of pigs being significantly viraemic). Active infections and those occurring early in life were HEV group 1 of genotype 3. Miss Cheney mentioned that PHE were in the process of testing the caecal sample collected so additional results are expected on HEV.

Extended Spectrum Beta Lactamase (ESBL) *E. coli*

8.6 Overall prevalence of ESBL *E. coli* was 23.4% with test method being capable of detecting very low numbers of ESBL *E. coli*. 22% of pig caecal samples were positive for CTX-M *E. coli*. 85% of CTX-M *E. coli* from pigs were sequence type CTX-M 1. 2.2% of pig caecal samples were positive for SHV-12 *E. coli*. The ESBL enzymes which were detected in *E. coli* from pigs were mostly of types which were different from those causing most human infections in the UK.

Antimicrobial Resistance in *Campylobacter coli*

8.7 153 *C. coli* isolates were tested for their *in vitro* susceptibility to seven antimicrobials. The greatest levels of resistance were observed against tetracyclines (77.8%) and streptomycin (66.0%). There was also a moderate level of resistance against erythromycin (27.5%), nalidixic acid (17.0%) and ciprofloxacin (12.4%). No resistance was observed for either chloramphenicol or gentamicin.

8.8 As EU Member States (MSs) use similar test methods, findings are comparable to results in other MSs and this reveals that resistance levels in *C. coli* in pigs are generally similar to or better than those occurring in other MSs with similar pig husbandry, with the exception of the Nordic MSs which report low or very low levels of resistance to some antimicrobials.

Porcine reproductive and respiratory syndrome virus (PRRSv)

8.9 The study provided the first UK-wide seroprevalence estimate of 58.3% with the highest seroprevalence being in dense pig farming areas of England. It was highlighted that because the vaccination status of the pigs was unknown it is possible that the findings are an overestimate of field infection.

8.10 Miss Cheney concluded her presentation by outlining the benefits of the survey which include: opportunity for the UK to fulfil statutory requirements and plug data gaps in multiple areas. The survey was highly cost effective and was a multi-funded study that demonstrated good collaborative working. The study revealed a consistently lower prevalence of target bacteria found on the carcasses compared with carriage of the same microorganisms in the animal. This demonstrates the effectiveness of the dressing procedures in the abattoir to limit the contamination of pig carcasses and therefore control the risk of exposure of consumers to harmful pathogens.

8.11 The Chair invited comments from Members on the findings of the study, the following points were discussed:

- Concerning the sequencing of the HEV RNA, it was queried whether there were group 1 and group 2 comparable studies in Europe and in particular whether genotype 3 was present in pigs and humans and non-travel G3 group 1 and G3 group 2 viruses of human as this appear to be on the increase. Miss Cheney responded that she was unaware of work being done in other MSs. However, it was confirmed that PHE were leading on issues relating to HEV in the UK and they together with interested agencies were presently gathering and analysing data on HEV. Miss Cheney stated that PHE have various ongoing studies on HEV which they would report on in the future. These studies would be used to build on the findings from this survey. She added that the findings from this study on HEV were incomplete as the caecal sample results were not yet available.
- It was noted that there was evidence from South East Asia that particular strains of PRRSV could lead to an increase of *Streptococcus suis*, an important swine pathogen that also carries zoonotic risk. Members were informed that AHVLA intend to continue to analyse the survey data to assess whether the combination of infections could result in the shedding of other pathogens.
- It was asked if there were plans for other work on *Toxoplasma* particularly testing for infectivity. It was noted that the *Toxoplasma* Reference Unit, Public Health Wales have retained heart and tongue tissue and it was plausible that testing for infectivity could be done in the future.
- Members welcomed the working together of Government Departments across the 4 UK countries on this collaborative and multi-funded project which is unprecedented. It was noted that the project provided the opportunity to fulfil statutory requirements and plug data gaps. Cost of sample collection and testing shared amongst the project partners and impressive turnaround time were also mentioned as a plus for this project.
- Reference was made to the 2006/07 baseline study and a question asked on the key differences in the number of samples and methodologies used that might contribute to the variations in the outcome of the above survey. It was confirmed that in the 2006 study only finishing pigs were sampled. In the

above study the target population was all pigs that came for slaughter (finishers and cull sows and boars). 90% of the pigs sampled were aged under 1 year old. Also it was stated that the 2006 study was for 12 months while the current study was for 4 months. Both surveys revealed no seasonal variation in *Salmonella* levels.

- ACMSF Chair thanked Miss Cheney for presenting the findings of this study to the Committee and highlighted that it provides useful information for future risk assessment.

9. Risk profile in relation to *Toxoplasma* in the food chain (ACM/1151)

9.1 Dr Paul Cook introduced paper ACM/1151 the purpose of which was to provide feedback to the Committee on the actions taken in response to the recommendations in the Committee's *Toxoplasma* report.

9.2 Dr Cook outlined some of the ways the recommendations in the report, especially relating to data gaps, were being addressed:

- In relation to human disease, work to develop a pilot study to identify the risk factors for acute infection with *T. gondii* England and Wales had started. Public Health England had undertaken interviews with participants and collected some information, but analysis of the data had not yet started. Dr Cook also informed members that he had been made aware that there would be a paper published in the August edition of the journal "Epidemiology and Infection" on enhanced surveillance of toxoplasmosis in England and Wales 2008-2012, which should also provide more up-to-date data than that which was available to the *Ad Hoc* Group.
- In relation to animal data, there was an EFSA project on the relationship between seroprevalence in livestock and the presence of *T. gondii* in meat involving a number of European countries. In the UK FSA is working with the Royal Veterinary College and Moredun Institute on UK input to this project UK which includes experimental studies in cattle, an abattoir study in cattle involving serological testing and identification of viable cysts and a study of pigs raised under outdoor conditions to identify risk factors for infection. Participation in this project will allow access to data from Europe and comparison with the situation in the UK. The approach is to undertake literature reviews, with a synthesis of this to inform experimental design, followed by abattoir studies, serological and tissue testing and other experimental studies. The project is expected to be completed by 2015 and the Committee would be updated on progress in due course.
- As part of the AHVLA pig abattoir survey, presented under the previous agenda item, data was collected from the testing of carcasses in 14 slaughterhouses. This found the antibody seroprevalence to *T. gondii* was 7.4% (95% CI 5.3-9.5).

9.3 Dr Cook also outlined how the FSA had addressed the recommendations relating to advice given to immune-compromised groups in relation to *Toxoplasma*. The paper gave details of the advice to pregnant women and other vulnerable groups, on the NHS Choices website, which had been revised

in February 2014 to include stronger emphasis on how to reduce the risk, for example the option to freeze cold cured/fermented meats. Dr Cook pointed out that this advice was part of a package of general hygiene advice including contact with environmental sources of *Toxoplasma*.

- 9.4 The Chair invited members to comment on the progress made to date on the FSA's response to the ACMSF's recommendations. The Chair of the *Ad Hoc* Group stated that it was important for the Committee to receive feedback on what had happened to their advice, especially since some of those who had been part of the subgroup were not members of the main ACMSF. A member asked if any further work was planned on the subject of heat destruction of *Toxoplasma* cysts, bearing in mind the trend towards low temperature cooking of meat. Dr Cook replied that some of the animal studies may help increase knowledge concerning the prevalence and numbers of *Toxoplasma* cysts in meat, but there were no immediate plans for any specific work in this area.

Action: Secretariat to forward paper ACM/1151 to the co-opted members of the *Ad Hoc* Group on Vulnerable Groups for information

10. Epidemiology of Foodborne Infections Group (ACM/1152)

- 10.1 The Chair invited Dr Cook to update Members on the outcome of the EFIG meeting which took place on 5 June 2014. He reported that between January – December 2013, there was a total of 1,168 reports of *Salmonella* from livestock species not subject to *Salmonella* National Control Plans (NCP). This was similar to January – December 2012 (1,153 reports) and a 7% decrease compared to the equivalent period in 2011 (1,251 reports). Provisional data for January to March 2014 revealed a total of 248 reports of *Salmonella* from livestock species not subject to *Salmonella* NCP.
- 10.2 Trends in laboratory reports for *Salmonella*, *Campylobacter*, *Listeria monocytogenes* and *E.coli* 0157 in humans were reported. The decline in non-typhoidal *Salmonella* infections continued, with the numbers of cases and rates of infection remaining in decline for the past 10 years in UK. The decline in *S. Enteritidis* continued in all countries, and this was presumed to be as a result of PT4 strains as this phage type continued to decline following interventions in the poultry and egg industries. Infections with *S. Typhimurium* overall were only slightly lower than ten years ago, but would be lower still, were it not for the rise in *S. Typhimurium* Definitive Type 193 (DT 193) that had been seen in all countries in recent years.
- 10.3 Reported *Campylobacter* infections continued to decline in England, Wales and Scotland, to levels seen in 2009. Northern Ireland continued to report rates of infection considerably lower than those for the rest of UK and further work is underway to try and identify reasons for the lower rates in Northern Ireland. *Listeria monocytogenes* remained lower than in most recent years, though with small reported numbers the data remained particularly stochastic, with the overall rate of infection in the UK fluctuating from 1.9 cases per million population to 4.1 / million in the past 13 years. The rates of VTEC O157

infection in Scotland and Northern Ireland remained higher than in England and Wales.

- 10.4 The number of outbreaks reported in 2013 returned to similar levels as those seen in 2011. Reported outbreaks of *Salmonella* continued to decline against an increasing number of reported *Campylobacter* and *Clostridium perfringens* outbreaks. In 2013 the largest outbreak reported was a *Salmonella* Agona PT40 and other GI pathogens associated with curry leaves used at food festival in the North east in February-March. Other outbreaks of interest included *Salmonella* Goldcoast associated with whelks, *Salmonella* Typhimurium DT120 associated with a hog roast, *E.coli* O157 PT2 linked to watercress and *Salmonella* Mikawasima associated with eating chicken outside the home.
- 10.5 Dr Cook also outlined other issues EFIG considered at their meeting which included updates on antimicrobial resistance matters and PHE microbiological food studies.

11. Committee subgroups

- 11.1 Prof John Coia (in the absence of Prof David McDowell) updated the Committee on the third and fourth meetings of the Antimicrobial Resistance (AMR) Working Group.
- 11.2 Prof Coia reported that the third meeting of the Working Group discussed the AMR aspects of AHVLA's prevalence study of a number of infectious agents in UK pigs at slaughter. Members discussed the methods used in the study, the report's findings, and the implications of the findings which related to the group's overview and horizon scanning role on AMR. Members were disappointed that there were no data on antimicrobial resistance in *Salmonella*. Members agreed that, while it was difficult to make comparisons with previous surveys, at present there was very little evidence that the level of risk from antimicrobial resistant organisms and their genes had decreased. Members recognised that antimicrobial resistance was a worldwide problem and better coordination between countries on both veterinary and human levels of resistance and susceptibility, would improve the assessment of risk in the future. The group's suggestions on possible future work were outlined in paper ACM/1153.
- 11.3 The fourth meeting of the group was summarised in paper ACM/1154. Prof Coia reported that the group was briefed on the Government's AMR policy in relation to animal health by a member of Veterinary Medicines Directorate AMR Team. The presentation covered an update on UK AMR policy and the EU Commission AMR action plan published in 2011 which set out 12 actions the EU would be concentrating on, 5 of which were veterinary related.
- 11.4 Members were updated on recent changes to EU legislation and on the goals of the Government AMR Strategy 2013-2018 which was launched in September 2013.

- 11.5 The group noted that as expanding surveillance data was one of the areas for action, it was important that there were clear objectives in carrying out surveillance so that it achieved whatever it was supposed to achieve, for example identifying new and emerging problems, monitoring the impact of interventions or analysing specific issues.
- 11.6 The group considered EFSA's opinion on Carbapenemase resistance. It was reported that carbapenemases were regarded as a potentially emerging problem following reports of carbapenem-resistant bacteria in food-producing animals in some European countries.
- 11.7 The group commented on the Commission implementing decision on the monitoring and reporting of antimicrobial resistance in zoonotic and commensal bacteria. The Decision describes in detail the rules for the harmonised monitoring and reporting of antimicrobial resistance to be carried out by Member States in accordance with article 7 (3) and 9 (1) of Directive 2003/99/EC concerning the monitoring of zoonoses and zoonotic agents.
- 11.8 The group considered a paper that highlighted the potential gaps in the feed chain through imports of feed from third countries.
- 11.9 A presentation was received on the activities of the ad hoc AntiMicrobial Expert Group (AMEG) set up by the European Medicines Agency (EMA) to debate certain issues relating to the veterinary use of antimicrobials and AMR. It was reported that AMEG was established to address the request for advice from the European Commission (EC) on the impact on public health and animal health from the use of antibiotics in animals, which EMA received in February 2013. The group commented on the work being undertaken by AMEG.
- 11.10 Prof Coia added that the group was briefed on the issue of feeding of waste milk to calves. They requested to see recent studies carried out on this issue and agreed to keep a watching brief on this area.
- 11.11 Following the above update a member who is a part of an EU project that is measuring AMR in illegally imported foods volunteered to pass to the AMR group any relevant data that may help the group in its work.

Action: Dr Barker to provide AMR group with relevant data from the EU project measuring AMR in illegally imported foods

12. Dates of future meetings (ACM/1155)

- 12.1 Members were asked to note the dates of the ACMSF meetings for 2014 (2 October) and 2015 (29 January, 25 June and 1 October).

13. Any other business

- 13.1 Dr Paul Cook drew attention to the risk assessment AHVLA are conducting on the use of *Mycobacterium bovis* BCG Danish Strain 1331 in Cattle (paper

ACM/1162: Risk assessment for the use of *Mycobacterium bovis* BCG Danish Strain 1331 in Cattle: Risk to public health refers). Market authorisation is being sought for this vaccine. AHVLA were undertaking risk assessment on the safety of meat and milk from vaccinated animals participating in the field trial. Members were informed that risk assessment would be brought to them for comments at the October 2014 meeting.

13.2 The Chair informed members that the next horizon scanning activity planned for October 2014 has been moved to January 2015.

14. Public Questions and Answers

14.1 The Chair drew formal proceedings to a close and invited questions and comments from the public in relation to ACMSF and risk assessment.

14.2 Andrew Joret, Chair of the British Egg Industry Council asked for confirmation that the data collected for the IID2 attribution study was for 10 years, ending in 2010. He made the point that it was not possible to differentiate data relating to Europe and to UK eggs. He wished to state that the British Lion code of practice for producing eggs began in 1998 and there had been a steady improvement in the safety of eggs since that time. The National Control Programme for *Salmonella* was introduced in 2009 which followed closely the Lion scheme and in some cases exceeded its requirements. Bearing in mind the UK has the best record compared to the rest of Europe, he asked if it would be possible, in giving risk assessment advice, for the ACMSF to differentiate between eggs produced under a strong code of practice such as the Lion scheme and advice for eggs in general.

14.3 The Chair confirmed that the data used in the study was from 2000-2010 and could only provide a snapshot of the situation at that time. She informed Mr Joret that in the Forward Work Plan the FSA would be asking the Committee to reconsider their microbiological risk assessment for shell eggs and so it may be possible to nuance the advice taking into account surveillance and outbreak data. Dr Adak added that questionnaires sent out during outbreak investigations where eggs are suspected specifically included a question on where the eggs had come from. He said that outbreaks associated with eggs had been going down for some time.

14.4 Mr Tom Miller, retired catering technologist, made 2 comments in connection with the Kitchen Life study. The first was to suggest that the Foundation level Food Hygiene qualification should be part of the National Curriculum. The second was to reiterate a point he had made previously that there was a need for definitive advice on how to clean and with what.

14.5 Mr Miller also wished to suggest that the Committee assist the FSA in the risk assessment of butter icing, as he had recently noticed on the Agency's web page entitled "Catering advice for charity and community groups providing food" that it is suggested that both at home and at the fete stall, cheesecakes and any cakes or desserts containing cream or butter icing should be kept in the fridge or that they be left out of the fridge for the shortest time possible. His point was that he considered butter icing to be shelf stable at ambient

temperatures and that when the general public receive one piece of advice that their experience suggests is wrong, they tend to ignore all the advice given. Unless latest research suggested otherwise, he suggested the reference to butter icing should be amended. The Chair thanked Mr Miller for his comments and asked that his concern about this advice should be drawn to the attention of the FSA by the Secretariat.

Action: Secretariat

Annex 1

Members of the public attending the 26 June 2014 meeting

Elizabeth Andoh-Kesson	British Retail Consortium
Steve Batchford	Tesco
Fiona Brookes	2 Sisters
Catherine Cockcroft	Exova
Amanda Cryer	British Egg Industry Council
Andrew Joret	British Egg Industry Council
Intisar Khan	Dairy Crest
Angus Knight	Leatherhead Food Research
Barry Mirhabib	Brakes
Tom Miller	
Melanie Patterson	Life Technologies
Helen Rees	ADAS
Bengü Said	Public Health England
Steve Spencer	Veterinary Medicines Directorate
Andrew Walker	Premier Foods
Elizabeth Williamson	Sainsburys
Nicola Wilson	Westward Labs