

Advisory Committee on the Microbiological Safety of Food

Annual Report 2004

Advises the Food Standards Agency on the
Microbiological Safety of Food

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The Advisory Committee on the Microbiological Safety of Food (ACMSF) was established in 1990 to provide the Government with independent expert advice on the microbiological safety of food.

The Committee's terms of reference are:

to assess the risk to humans from microorganisms which are used, or occur, in or on food, and to advise the Food Standards Agency (FSA) on any matters relating to the microbiological safety of food.

The various issues addressed by the Committee since its inception are detailed in this and previous Annual Reports¹⁻¹² and in a series of subject-specific reports.¹³⁻²³

Foreword

1. I am pleased to present this, the 2004 Annual Report of the Advisory Committee on the Microbiological Safety of Food (ACMSF).

2. The Committee's major output in 2004 has been to consider the potential health risk from infant botulism associated with the consumption of chilled or frozen baby foods. The evidence-gathering process, scientific assessment and writing of the report on this complex subject have been carried out by the *Ad hoc* Group on infant botulism over a series of meetings during the year. The Group is currently finalising the report of its work, including subjecting the risk elements of the report to independent scientific review. The conclusions and recommendations from this report will be used to inform the future development of ACMSF advice to the Food Standards Agency.

3. Staying with the theme of botulism, a new major area of ACMSF work undertaken in 2004 relates to the risk to human health from cattle botulism associated with the spreading of poultry litter on agricultural land. In June we set up an *ad hoc* Group to examine food chain issues linked to botulism or suspected botulism in cattle. I chaired the Group and I am very grateful for the efforts of the members to date in addressing this task. The Group considered documentary information and scientific literature, and heard evidence from several government departments and agencies and the scientific community on a number of issues. These included the risks and uncertainties associated with botulism in cattle, UK management of botulism outbreaks in these animals, clinical analysis and diagnostic testing for botulism, structure and transfer of toxins into the food chain and susceptibility of humans to different toxin types. Further work will be undertaken in 2005, prior to reporting the outcome of the Group's deliberations to the full committee.

4. Other potential risks to human health through food chain exposure pathways discussed by the Committee included undiagnosed encephalitis in ruminants. The Committee also examined chronic sequelae of foodborne infections but concluded that the paucity of data available prevented derivation of an estimate for the severity of chronic sequelae as a result of foodborne illness.

5. We have considered several egg-related issues including current Food Standards Agency advice on egg use and consumption in the light of research and surveillance findings, and outbreaks of *Salmonella* associated with non-UK eggs. The Committee was briefed on work carried out by the Health Protection Agency on raw shell eggs and their use in catering premises, and results from the Agency-funded research sub-programme on eggs. Comments made by the Committee on the FSA research were

subsequently fed into a review of the egg research programme, which took place mid-way through 2004. Taking account of recent research and surveillance findings, the Committee concluded that existing advice on eggs should be carefully reassessed as levels of *Salmonella* in UK-produced eggs had reduced significantly since the original advice was issued.

6. Another issue tackled in 2004 was microbial control of doner kebabs. We concluded that whilst evidence suggested there was not a major microbiological problem associated with this type of food, contamination from other foods (in addition to kebab meat) such as salads may be important. As such, foodborne outbreaks arising from the contamination of salads will be considered in 2005. We also recognised that operator competence and handling of the product was key to controlling the microbiological safety of kebab meat.

7. We also considered whether the current advice on the safe cooking of burgers, issued by the Chief Medical Officer in 1998, was still appropriate. This followed a suggestion that in light of less stringent US recommended time/temperature conditions, the UK advice is more stringent than necessary. Due to the emergence of new published evidence available since the publication of the original advice, we set up an *ad hoc* Group to review the situation. In relation to guidelines for vacuum-packaged foods, we also recommended that, in light of new scientific evidence, the FSA should commission an independent review for further consideration by the Committee.

8. Our Working Group on surveillance has continued to provide input to the Committee. It reviewed an FSA-commissioned survey on *Salmonella* contamination of UK-produced shell eggs, and commented on the findings of a survey of *Salmonella* and *Campylobacter* contamination of poultry. Full details are included in later paragraphs of this Annual Report, and relevant papers are cross-referenced.

9. Horizon scanning also continues to be an important function of the Committee's work and a vital element in the forward planning process. We have developed work in the Imported Foods area, which followed up on last year's scoping exercise. In addition, the Imported Foods Group has undertaken new work to consider the microbiological risks associated with 'bush' meat. An electronic message board was also set up for use by the Committee, to facilitate immediate discussion of emerging issues relating to newly-emerging pathogens.

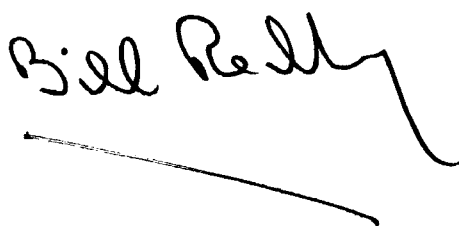
10. The Committee's drive to become publicly accessible has continued in 2004. All of our quarterly meetings continue to be open to the public with a public question and answer session featuring at the end of each agenda. Aside from meetings, we are also accessible via our e-mail address and web

pages. Indeed, our web pages are regularly updated for each meeting, and provide a useful source of information about the Committee and its activities. In 2004 we used the web site to publicly consult on our *Campylobacter* Report. We received a very positive response to the Report including comments on the consultation from a wide-range of interested parties, the views of which were carefully considered by the Committee prior to finalising the Report for publication.

11. Looking to the future, the Committee will be reporting on the outcome of the work of its *ad hoc* Groups on the risk to human health associated with infant botulism, and also botulism in cattle associated with poultry litter. We will also be taking forward *ad hoc* Group work on the safe cooking of burgers, and approaches to risk assessment. In addition, we hope to publish our Second Report on *Campylobacter* in the first half of 2005. Later in the year, following a request from the Food Standards Agency, we will be considering an FSA commissioned review of the microbiological risks to human health associated with 'bush' meat. We shall also be returning to the subject of guidelines for vacuum-packaged and modified atmosphere packaged foods, following a review of recent scientific evidence to support shelf life limitation to 5 days.

12. I am indebted to Professor Georgala, who retired in March 2004, for his long-serving contribution and his unswerving commitment as Chair of the ACMSF since 1996. My thanks also go to the members of the Committee and its Working and *ad hoc* Groups without whose efforts the ACMSF could not operate effectively, and to the many other individuals and organisations who have helped the Committee with its work. I am also very grateful for the support of the Secretariat, whose efforts in ensuring the efficient and effective conduct of Committee business is greatly appreciated. I look forward to continuing the work on the Committee in the forthcoming months.

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A handwritten signature in black ink that reads "Bill Reilly". The signature is written in a cursive style and is positioned above a horizontal line.

Professor Bill Reilly
Chairman

Introduction

1. This is the thirteenth Annual Report of the Advisory Committee on the Microbiological Safety of Food (ACMSF). It covers the calendar year 2004.

Chapter 1: Administrative Matters

Membership

Appointments

2. Appointments to the ACMSF are made by the Food Standards Agency (FSA), after consultation with United Kingdom Health Ministers (i.e. the “Appropriate Authorities”) in compliance with Paragraph 3(1) of Schedule 2 to the Food Standards Act 1999. The Agency has resolved that appointments to the ACMSF should be made in accordance with Nolan Principles²⁴ and the guidance issued by the Office of the Commissioner for Public Appointments (OCPA).²⁵ The FSA is not bound to follow OCPA guidance, as this applies only to appointments made by Ministers. However, although ACMSF appointments are not made by Ministers, the Agency has decided that it would nevertheless be right to comply with OCPA guidance.

Periods of appointment

3. To ensure continuity, appointments to the ACMSF are staggered (usually for periods of 2, 3 or 4 years) so that only a proportion of Members falls to be appointed, re-appointed or retire each year.

Spread of expertise

4. A wide spectrum of skills and expertise is available to the ACMSF through its Members. They are currently drawn from commercial catering, environmental health, food microbiology, food processing, food research, food retailing, human epidemiology, medical microbiology, public health medicine, veterinary medicine, and virology. The Committee also has a Member with knowledge of small and medium size enterprises, and 2 lay/consumer Members.

5. Members are appointed on an individual basis, for their personal expertise and experience, not to represent a particular interest group.

Appointments in 2004

6. A new Chairman of the ACMSF, Professor Bill Reilly, was appointed to the Committee in 2004. Professor Reilly is Head of the Gastrointestinal and Zoonoses Section, and Consultant in Veterinary Public Health, at Health Protection Scotland (formerly the Scottish Centre for Infection and Environmental Health). His appointment is for three years, from 1 April 2004 until 31 March 2007. Four new Members were appointed to the ACMSF in 2004; Professor Peter Williams, Professor Laura Piddock, Mr Paul McMullin

and, for one year, Mr John Bassett.^{26,27} Professor Williams provides the Committee with microbiological expertise, specialising in molecular genetic analysis and pathogenesis of infectious disease. His period of appointment runs from 1 April 2004 until 31 March 2007. Professor Piddock provides the Committee with medical microbiology expertise, specialising in antibiotic resistance in foodborne bacteria. Her period of appointment runs from 1 April 2004 until 31 March 2007. Mr McMullin provides the Committee with veterinarian expertise, with specific interests in poultry disease, pathology and veterinary product development. His period of appointment runs from 1 April 2004 until 31 March 2007. Mr Bassett provides the Committee with risk assessment expertise.

Re-appointments in 2004

7. The periods of appointment of 3 members – Professor Paul Hunter, Dr Katherine Hadley and Dr Quentin Sandifer – expired on 31 March 2004. Professor Hunter was re-appointed for a further 3-year term running from 1 April 2004 until 31 March 2007. Dr Hadley and Dr Sandifer were re-appointed for 2-year terms running from 1 April 2004 until 31 March 2006.²⁷

Retirements in 2004

8. The ACMSF Chairman, Professor Douglas Georgala retired from the Committee on 31 March 2004 after 10 years' service. Professor Mac Johnson and Dr Tim Wyatt also retired on the same date. Professor Johnson and Dr Wyatt had completed 9 and 6 years' service, respectively. In addition, Dr Geoff Andrews resigned from the Committee on 31 March 2004 after 4 years' service, reflecting his departure from the food industry.

9. The Chairman expressed his gratitude to all the retiring Members for their contribution to the work of the ACMSF and wished them well for the future.

Secretariat changes in 2004

10. Due to his retirement from the Food Standards Agency, Mr Colin Mylchreest stepped down as ACMSF Administrative Secretary after 10 years' service. Dr Lucy Foster replaced him as Administrative Secretary to the Committee.

11. The Chairman expressed his gratitude to the Secretary for his excellent contribution to the work of the Committee. Members also expressed their thanks and good wishes to Mr Mylchreest.

Committee and Group meetings

12. The full Committee met 4 times in 2004 – on 18 March, 24 June, 16 September and 1 December. With the exception of the March meeting, which was chaired by Professor Georgala, the meetings were chaired by Professor Bill Reilly. All full Committee meetings were open to members of the public.

13. The *Campylobacter* Working Group met twice, once under the Chairmanship of Professor Georgala, and once under the Chairmanship of Professor Reilly. The Group considered long-term research opportunities to support identification of ways of controlling *Campylobacter*. These were incorporated into a Memorandum on Research, which supplemented the Second Report on *Campylobacter* when it was issued for public consultation. Following the outcome of the consultation exercise, amendments to the Report were agreed and comments sought on the summary of consultation responses. At the December ACMSF meeting, members agreed that, following minor amendment, the Second Report on *Campylobacter* should be sent to the FSA Chairman and approval sought for publication of the Report in 2005. The Committee also agreed to publish the ACMSF response to its consultation on the Report on the FSA web site.

14. The standing Surveillance Working Group (Chair: Professor Humphrey) considered the final report for an FSA survey of *Salmonella* contamination of UK shell eggs. The Group also considered a draft report of a survey funded by the Welsh Local Authorities, the National Public Health Service, Wales and the FSA of *Salmonella* and *Campylobacter* contamination of whole, raw poultry on retail sale in Wales in 2003. In both cases, the work was carried out through correspondence, rather than by meeting.

15. The *Ad Hoc* Group on Infant Botulism (Chair: Professor O'Brien) met five times to consider the potential human health risk from infant botulism associated with the consumption of chilled or frozen baby foods. An interim report on the findings of this Group was presented to the Committee meeting at the end of the year. The horizon scanning *Ad Hoc* Group on Imported Foods met once (Chair: Mr Mepham). Two meetings of the *Ad Hoc* Group on Botulism in Cattle also took place. The *Ad Hoc* Group on Emerging Pathogens exchanged views in correspondence via an electronic message board.

Current membership and Declarations of Interests

16. Full details of the membership of the Committee and its Working and *Ad Hoc* Groups are given in Annex I. A Register of Members' Interests is at Annex II. In addition to the interests notified to the Secretariat and recorded at Annex II, Members are required to declare any direct commercial interest in matters under discussion at each meeting, in accordance with the ACMSF's Code of Practice (see Annex III of 2002 Annual Report).¹¹ Declarations made are recorded in the minutes of each meeting.

Personal liability

17. In 1999, the Secretary of State for Health undertook to indemnify ACMSF Members against all liability in respect of any action or claim brought against them individually or collectively by reason of the performance of their duties as Members (Annual Report 1999⁸ paragraph 6 and Annex III). In 2002, the Secretariat asked the FSA to review this undertaking, given the fact that, since 2000, the ACMSF had reported to the Food Standards Agency where previously it had reported to UK Health Ministers. In March 2004 the Food Standards Agency gave a new undertaking of indemnification in its name, which superseded the earlier undertaking given by the Secretary of State. Details of this indemnification are given in Annex IV.

Openness

Improving public access

18. The ACMSF is committed to continuing to open up its work to greater public scrutiny. The agendas, minutes and papers (subject to rare exceptions on grounds of commercial or other sensitivity) for the Committee's quarterly meetings are publicly available and are posted on the FSA website at:

<<http://www.food.gov.uk/science/ouradvisors/microbiogsafety>>

19. The Committee also has an e-mail address:

<acmsf@foodstandards.gsi.gov.uk>

Open meetings

20. Following the recommendations flowing from the FSA's Review of Scientific Committees,²⁸ the ACMSF decided that, from 2003 onwards, all of its quarterly meetings should be held in public.

21. The March, June and September 2004 meetings of the Committee were held in Aviation House, the Food Standards Agency's London Headquarters. The December meeting was held in Trinity House, Tower Hill, London EC3.

22. All of these open meetings follow a common format. Time is set aside following the day's business for members of the public and others present to make statements and to ask questions about the ACMSF's work. The names of participants, the organisations they represent, and details of any statements made, questions asked and the Committee's response, are recorded in the minutes of the meeting concerned.

Work of the other advisory committees and cross-membership

23. The Secretariat provided Members with regular reports of the work of the other expert advisory committees advising the Food Standards Agency. Professor Gasson continued to serve as a member of the Advisory Committee on Novel Foods and Processes (ACNFP), thereby providing a first-hand link between the 2 committees.²⁹

Chapter 2: The Committee's Work in 2004

Campylobacter

24. A final draft of the Committee's Second Report on *Campylobacter* was submitted to the Chairman of the FSA in January 2004. The Working Group also met early in the year to review the Report and to identify where further information such as that derived from longer-term research requirements would have been helpful in identifying ways of controlling *Campylobacter*.³⁰ The output of that meeting was incorporated into a Memorandum on Research, which supplemented the Report. The Report and the Memorandum of Research were published for public consultation in May³¹. In September the Working Group considered the outcome of the consultation. A number of changes were agreed to the text of the Report, including insertion of an Annex reporting progress made by the Food Standards Agency to meet the ACMSF's recommendations.³² A revised draft of the Report, and the ACMSF response to the consultation, was considered by the Committee at its December meeting.³³ Following ratification of the Report by the Committee, a revised Second ACMSF Report on *Campylobacter* was submitted to the FSA Chairman for approval for publication in the first quarter of 2005. The Committee agreed to publish the response to the consultation on the FSA's web site in early 2005 (Annex V).

Clostridium botulinum

Infant botulism

25. In February 2004, the Group met to consider information received from a manufacturer of a range of baby food, on processing and food safety systems in place to produce safe frozen baby food. Information from an R&D Department of a Company on hazard characterisation and modelling of the distribution and numbers of spores in raw materials, designed to help assess the risk of infant botulism from non-sterilised baby foods, was also reviewed. In addition, the Group considered data from a trade association on the possible risks from minimally processed foods, and steps taken by a retailer to assure the safety of the baby food it sells.³⁰ Following a direct approach by the Secretariat, three highly diverse infant food manufacturing companies presented evidence to the Group at meetings held in April and May, relating to product development, processing and food safety operations. An expert on infant botulism provided information on the clinical and diagnostic epidemiology of *C.botulinum*. The Group also examined the advice to new manufacturers, including the advice provided by Local Authorities. A literature review was carried out to revisit the published evidence examining

the relationship between infant botulism and Sudden Death Syndrome³⁴. In September 2004, the Group received presentations from several Local Authorities giving guidance to minimally processed weaning food companies. In addition, presentations were received from independent experts on the risks associated with baby food manufacturing processes. The Health Protection Agency also provided information on the estimate of a possible infectious dose of *C.botulinum* in these foods. The Group concluded that a semi-quantitative risk profile was required in order to provide a scientific basis for any recommendations resulting from its work. The ACMSF Committee agreed that a small sub-Group of experts should be set up to carry out a risk profile.³² Mr Bassett (Member with expertise in risk assessment) was co-opted onto the *ad hoc* Group. An interim report of the outcome of the Group's deliberations was reported to the ACMSF at the end of 2004. The Committee was informed that the Group had met on five occasions and was now satisfied that it had met with sufficient individuals or reviewed documentary evidence to allow it to inform development of ACMSF advice to the FSA. In addition a Sub-Group had been convened to carry out a semi-quantitative risk profile of *C. botulinum* in infant foods. Several experts had been identified to peer-review the risk profile work. The Group was currently drafting a full report of the outcome of its deliberations. This Report would be submitted to the ACMSF for consideration at the June 2005 meeting, pending the outcome of the peer-review of the risk profile element of the work.

Botulism in cattle

26. The Committee was briefed in June 2004 about an increase in the number of cases of botulism incidents affecting cattle in 2003. This followed a letter from the Veterinary Laboratories Agency (VLA) to the Veterinary Record which highlighted the problem, and recommended several actions to reduce the risk of the disease.^{35, 36} The FSA sought the Committee's views on the food chain issues linked to botulism or suspected botulism in cattle. The Committee raised several issues that required further investigation. The Committee decided that an *Ad Hoc* Group should be set up to address the issue of cattle botulism with particular reference to the implications of spreading poultry litter in terms of the risk to human health. Levels of toxin and its occurrence in blood and in milk after processing would be considered within this remit.³⁴

27. Two meetings of the *Ad Hoc* Group took place in September and November. The Group heard evidence from the VLA on the risks and uncertainties associated with botulism in cattle and also management of botulism outbreaks in these animals. The VLA and the Health Protection Agency presented information on the molecular biology and structure of *C.botulinum* toxins and toxin types and susceptibility of humans to toxin types C and D. Evidence relating to the mechanism of transfer of the toxin into milk was also considered by the Group. Members concluded that the

mouse assay used for the detection of *C.botulinum* represented the gold standard for all types of botulism testing, but the sensitivity of this assay required consideration. Further information on diagnostic testing for *C. botulinum* and its toxins in animals and animal products was considered by the Group. The Department of Agriculture and Rural Development in Northern Ireland provided additional evidence on botulism outbreak management. A further meeting of the Group is scheduled for February 2005. In the intervening period, a Report on the deliberations of the Group is in preparation, for presentation to the ACMSF in the second half of 2005.

Eggs

Use of raw shell eggs in catering premises

28. The Committee was briefed by the Health Protection Agency on a report of the LACORS/HPA Co-ordinated Food Liaison Group study on the microbiological examination of raw shell eggs and their use in catering premises.^{37, 38} Members were informed that the study had its origins in the epidemiological investigation of the unusually large number of outbreaks in 2002 of *Salmonella* Enteritidis associated with the use of eggs in catering premises. The objectives of the study, carried out between April and May 2003, were to establish the rate of *Salmonella* contamination in raw shell eggs in catering premises, investigate any correlation between the type of egg and the presence of particular *Salmonella* sero/phage types, and to examine the use of eggs in catering premises in the UK.

29. Members were informed that a total of 34,116 (5,686 pooled samples of six) eggs had been collected from 2,104 catering premises. Eighty-seven per cent were UK eggs. *Salmonella* spp. were isolated from 17 (0.3%) pools of eggs. Fifteen of these were *S. Enteritidis*. *Salmonella* Livingstone and *S. Typhimurium* were also isolated. Among the conclusions drawn from the study were that, whilst no egg could be guaranteed *Salmonella*-free, rates of *Salmonella* contamination in UK-produced eggs had decreased significantly when compared with results from a previous study carried out in 1995/96; while no firm conclusion could be drawn when comparing the rate of *Salmonella* contamination of Lion and non-Lion Code eggs, the findings might demonstrate the wider benefit of vaccination to UK egg safety; recent experience suggested that the nature of the catering egg market and the intermittent use of imported eggs may allow the sporadic introduction of highly contaminated eggs.

30. The Committee expressed concern that some premises visited had had no hand washing facilities, and that, even where available, these were not universally used. This was regarded as unacceptable for premises serving food, and contravened legal requirements. Similar remarks were also made in relation to HACCP systems. The significant level of lack of

awareness of egg safety advice amongst managers was another cause for concern. The Committee agreed that local authority inspection, while of vital importance in encouraging compliance with food hygiene legislation, could not of itself provide a complete solution to existing problems. There was a key role for a continuing programme of advice and education to supplement the inspection and enforcement effort. Members welcomed the efforts being made under the banner of the FSA's food hygiene campaign, and encouraged the Agency to continue to look for innovative and more effective means of targeting and delivering advice. In addition, a survey of the *Salmonella* status of non-UK eggs, many of which went to catering outlets was recommended. In designing such a survey, account needed to be taken of the changing pattern of supplies and the fact that a snap shot survey might not be representative of the pattern of the use of eggs over the longer-term.

Egg research

31. The Committee was briefed by the FSA in March 2004 on results from the Agency-funded research sub-programme on eggs.³⁹ The programme had been shaped by ACMSF recommendations for further research to improve understanding of the sources of *Salmonella* Enteritidis and possible routes of infection for human disease. Therefore the Agency sought the Committee's views on the findings of the eggs research programme and the need for further work in this area.

32. Details of several projects were outlined, including: (Project No. B03015) a study to examine the egg-to-egg variations in the growth of *Salmonella* spp in egg contents; (B03016) cross-contamination from the external surface of eggs in relation to the risk of exposure to *Salmonella*; (B03017) a review of commercial egg washing with particular emphasis on the control of *Salmonella*; and (B03018) a pilot study to estimate the nature and extent of adherence to government guidance on safe egg use in the catering industry.

33. The Committee did not identify any major gaps in the research programme. In relation to the individual research topics, it concluded that:

- (B03015) poultry genomics might provide some helpful insights into the behaviour of *Salmonella*. It was noted that Defra was supporting work in this area;
- (B03016) the findings from this project were unsurprising. Defra was funding research in this area too and would keep ACMSF informed of developments;
- (B03017) as the question of commercial egg washing was now being considered by the EU, a need for further research might be identified; particularly as *Salmonella* grows more rapidly in washed eggs;

- (B03018) no further work seemed necessary.

34. Members were informed that the Committee's comments would be fed into the planned review of the egg research sub-programme when this took place later in the year.⁴⁰

Egg advice

35. In December, the Food Standards Agency sought the views of the Committee on current FSA advice on egg use and consumption in the light of recent survey and research findings and on whether appropriate groups have been identified as targets for the advice.⁴¹ Members discussed how vulnerable groups such as immunocompromised patients were defined, and the relationship between prevalence levels and human illness, recognising that not all immunocompromised patients were at risk from all infections.

36. In response to a Committee request for information on the FSA's handling of *Salmonella* in imported eggs, the FSA informed Members that in 1998, the FSA and the Egg Marketing Inspectorate took the view that all imported eggs were used in catering. However, following a recent investigation by the Egg Marketing Inspectorate into the destination of imported eggs entering the UK, it appeared that although the majority of imported eggs entered the catering trade, some imported eggs now also entered retail sale. The Health Protection Agency and FSA were currently compiling a dossier of evidence associated with problems relating to outbreaks of *Salmonella* associated with Spanish eggs for submission to the Standing Committee on Food Chain and Animal Health in December. In addition, the Spanish Government was currently implementing a programme to control *Salmonella* in eggs. The FSA was continuing to monitor the incidence of *Salmonella* outbreaks due to Spanish eggs.

37. The Committee expressed a clear view that existing advice on eggs should be reassessed as levels of *Salmonella* in UK produced eggs had reduced significantly since the original advice was issued. However, Members cautioned that any changes to well-established advice would need to be communicated carefully. The Committee noted that information on levels of *Salmonella* attributable to imported eggs was incomplete, and agreed that confirmation was needed that egg stamping was being used correctly and that consumers were aware of the Agency's advice on eggs.

Microbial control of Doner kebabs

38. At the request of the Committee, Members were briefed by the FSA on the processes involved in the production of doner kebabs. Information from microbiological surveys, evidence of outbreaks linked to kebabs and kebab establishments, and details of Local Authority advice on the production, use and storage of doner kebabs was provided.⁴² Members were informed that

sales of doner kebabs, and other types of kebabs, appeared to be a growth area in the 'fast food' sector. The findings from microbiological surveys over the last ten years did not suggest a major problem with this type of food. HPA outbreak data suggested that contamination of foods other than or in addition to the kebab meat could also be important, for example from salads. Potential hazards associated with the production, storage and use of doner kebabs and kebab meat appeared to be well recognised, with many local authorities providing guidance to shops and caterers via web site related material.

39. The Committee concluded that operator competence and handling of the product was key to controlling the microbiological safety of kebab meat. Advice provided by Local Authorities on handling practices and storage of large pieces of meat was conflicting. Therefore, there was a need for co-ordinated national guidance on handling of these meat products. Evidence from New Zealand mirrored that presented in the briefing paper. The Committee requested that the Food Standards Agency consider current doner kebab handling practices with a view to standardising Local Authority guidance. Evidence relating to foodborne disease outbreaks arising from the contamination of salads would be presented to the Committee in 2005.

Safe cooking of burgers

40. The Committee was informed by the FSA that it had been approached by industry with a suggestion that, in light of less stringent time/temperature requirements in the USA, the recommended time/temperature conditions for the cooking of burgers were more stringent than was necessary resulting in overcooking. Members were reminded that in 1997 the Committee considered a range of advice for industry and consumers on the safe cooking of burgers. The Committee's advice formed the basis of the Chief Medical Officer's (CMO) revised guidance issued in 1998. Therefore the FSA sought the Committee's views on whether the current advice issued by the CMO in 1998 was still appropriate.⁴³

41. Members expressed a range of views although the weight of opinion highlighted caution in moving away from established guidelines. In light of new published evidence available since the publication of the CMO advice in 1998, the Committee agreed to set up a short-life *ad hoc* group to review the current advice. This *ad hoc* Group aims to update the Committee on its progress at the March 2005 meeting.

Undiagnosed encephalitis in ruminants

42. In June 2004, the Committee was briefed by Dr Brown on a recent human health risk assessment carried out by an Expert Group chaired by the HPA, of which he was a member. He explained that this Group was convened following a case of poliomyelitis in a heifer, which had recently received coverage in the press.

43. Dr Brown informed the Committee that, at this risk assessment meeting, experts reviewed information about the original case in a heifer, another related case in a bull and 20 cases in sheep, which had occurred over a 10-year period. Recent laboratory investigations from the original case in a heifer identified an enterovirus as the most likely cause of infection, which the Group concluded was unlikely to pose a threat to human health. Enteroviruses did not usually cross between species, and in any case none of the affected animals had entered the food chain. Further, if an affected animal did manage to enter the food chain, cooking or pasteurisation would inactivate enteroviruses. Further investigations were needed to collate all the clinical and pathological findings, as the virus had only been identified in one case to date and therefore it was difficult to complete a full risk assessment. Further work was also required to examine the clinical and pathological differences between the cattle and the sheep cases. In addition, the Group was also informed of another 7 cattle cases, with similar neuropathological changes that had been submitted under BSE Orders between 2000 and 2003 and were found to be negative for BSE.

44. The Committee concluded that, at the present time, the data so far represented incomplete investigation and knowledge of a collection of cases of encephalitis and encephalomyelitis in two different species, and that these were likely to be due to a range of viruses. The existing HPA expert risk assessment group was best placed to continue evaluation of the risk to human health, including risks through the food chain. A press release reporting the outcome of the expert risk assessment Group was subsequently circulated to the Committee.⁴⁴

Chronic Sequelae of foodborne infections

45. Professor O'Brien updated the Committee on work she had carried out to investigate chronic sequelae of foodborne infections. Members were informed that the original aim of this work was to derive an estimate for the severity of chronic sequelae as a result of foodborne illness. However, the nature of the information available in the literature was limited due to a lack of standard case definitions of chronic sequelae, variable periods of follow-up, poor response rates and a bias towards patients with severe symptoms. There was also a lack of good demographic and microbiological data. However, available data suggested that between 6 and 30% of foodborne cases developed chronic sequelae, depending on case definitions and length of follow-up. Several studies were highlighted. The Committee concluded that it was difficult to quantify the information available and therefore to derive an estimate for the severity of chronic sequelae.

Food Standards Agency – draft strategic plan

46. The Food Standards Agency briefed the Committee on its draft Strategic Plan for 2006-10 in June 2004.⁴⁵ This was in addition to receipt of copies of the consultation package that been circulated to Members in April

for comment by 25 June.⁴⁶ Members were updated on progress against the current Strategic Plan (2001-2006), and on the Agency's performance against the Plan's targets. The FSA representative described the process and time-scale surrounding development of the new draft Strategic Plan, and reviewed future possible influencing factors for the Agency, as identified by a horizon-scanning workshop. Mechanisms for the Plan's delivery were also summarised. Key aims of the new Plan focussed on food safety, eating for health and choice.

47. Members noted that a numerical target had not been set for continued further reduction of foodborne illness, as the Agency was working to develop a more sophisticated approach to measuring foodborne illness. This included monitoring the severity of illness, rather than just the number of cases. Prior approval of food premises would be discussed by the FSA Board later in the year. Views from the consultation exercise would be used to develop a model for enforcement. A new approach would consider issues arising from EU enlargement. The Plan made no reference to non-UK sourced food, impact of globalisation of food processing and freedom of choice on achievability of food labelling.

48. Following the outcome of the consultation period (which ended 25 June), the Strategic Plan was considered by the Agency's Board in September, and published in Autumn 2004.⁴⁷

Surveillance

FSA survey of *Salmonella* contamination of UK-produced shell eggs on retail sale

49. In March 2004, the Chairman of the Working Group on Surveillance (Professor Humphrey) presented to the Committee the Group's views on a finalised draft Report of an FSA survey of *Salmonella* contamination of UK-produced shell eggs on retail sale.⁴⁸ The Committee noted that the Group had been very encouraged by the fall in prevalence of *Salmonella* in UK eggs and welcomed the part played by voluntary egg industry controls in bringing about this reduction. The Group regarded vaccination of pullets as the key intervention and stressed that vaccination should not be discouraged. The Group was concerned about the danger of the survey data being over-interpreted. While the Group regarded designing the sampling frame to reflect market share as reasonable in relation to the objective of measuring overall production prevalence, Members had doubts about some of the inferences drawn when analysing stratified data. The Group had felt that the only safe conclusions to be drawn from the survey were that, compared with earlier surveys, there had been a marked reduction in egg contamination rates, and no egg contents were positive; that *Salmonella* was still present in UK egg production, albeit at a low level; and that because the overall contamination rate was so low, it was not possible to make a reliable comparison of different production types.

50. In conclusion, the Committee welcomed the findings of the survey that there had been a 3-fold reduction in the level of *Salmonella* contamination since the survey in England in 1995/96. However, it was noted that eggs could still contain *Salmonella* and it was therefore hoped that industry would maintain its efforts to keep on top of the problem. It was also noted that *Salmonella* contamination continued to be a problem in relation to some non-UK eggs and that some other EU Member States could benefit from adopting a similar approach to tackling the problem to that adopted by the UK industry. Members noted that the FSA had already taken steps to make other Member States aware of the problems encountered and were also planning a survey of non-UK eggs.

51. Further details of the Committee's consideration of the report of this survey can be found in the minutes of the 51st meeting.³⁰

Survey of *Salmonella* and *Campylobacter* contamination of whole, raw poultry on retail sale in Wales in 2003

52. Dr Meldrum (National Public Health Service, Wales) briefed the Committee on the findings of a 2003 survey of *Salmonella* and *Campylobacter* contamination of whole, raw poultry on retail sale in Wales.⁴⁹ He reported that the results of the work had shown some consistency between the 2002 and 2003 surveys. Further, there was a similarity in the timing of the early summer *Campylobacter* peak in the 2002 and 2003 surveys. There was also a similarity in the timing of the early summer peak between human *Campylobacter* infections and chicken isolation rates. However the prevalence of *Campylobacter* contamination of chicken remained high in the second half of 2003 which contrasted with the trend seen in 2002.

53. Mr Kyriakides presented the views of the Working Group on Surveillance on the full report of the survey.⁵⁰ At the request of the Food Standards Agency, these views included comments on the survey forming the basis of a model for future rolling surveillance. In summary:

- The study used a randomised premises selection process to collect samples. This may have resulted in under sampling of products with larger sales volumes. Therefore it would not give a truly representative prevalence. In the context of rolling surveys, to assess the risk of exposure to the pathogens, the sampling process would benefit from being refined, for example, by considering sales volumes per retailer.
- An indication of confidence intervals for the overall positive rate for *Salmonella* and *Campylobacter* was required to assess reductions in the prevalence.

- For rolling surveys, strict control over cross-contamination was essential. Tight procedures for sampling at premises would need to be in place. In addition, a typing approach was required to assess the association between human cases and poultry isolates.
- Percentage positive data should be replaced with a calculated rate figure of the number of positive chickens to account for the number of chickens sold at a particular time. This approach would also require a sales-based sampling plan and consideration of seasonal volumes of poultry.
- Differentiation between intensively reared and extensively reared poultry was missing.
- Methodology for rolling surveys required standardisation.

54. The Committee noted that it was not feasible to type all the survey samples for *Campylobacter* isolates. Members discussed traceability of samples taken from independent butchers, and agreed that where possible, sampling officers should obtain information on the provenance of samples.

55. The Committee was informed by the Food Standards Agency that there were no plans to include *Campylobacter* enumeration as part of the current rolling survey programme, due to methodological problems highlighted in an earlier survey carried out in 2001.

FSA Consultation on guidelines for vacuum-packaged and modified atmosphere packaged foods

56. The Food Standards Agency briefed the Committee on issues raised in response to the Agency's consultation on FSA Guidance on the safety and shelf-life of vacuum and modified atmosphere packed chilled foods with respect to psychrotrophic *Clostridium botulinum*.⁵¹ Members were of the view that:

- Retailers were supportive of the original ACMSF advice based on a shelf-life limitation of 10 days, even though this advice was more restrictive than that in some other EU countries.
- There were gaps in the scientific evidence to support the shelf-life limitation of 5 days. Modelling data to support the 5-day proposal was based on broth studies with a high loading of *C. botulinum*, and thus was not representative of what was likely to

occur in practice. Recent studies carried out by the retail sector did not reflect these models. A more detailed review of the evidence underpinning the 5-day shelf-life limitation was required. The impact of new technology on food processing required consideration, as part of the development of the revised guidance.

- Many products with an associated risk of *C. botulinum* had a shelf life longer than 5 days. The Committee was not aware of any outbreaks of *C. botulinum* in properly chilled foods. Thus controls in the proposed Guidance appeared disproportionate and to outweigh risk.

57. The Committee concluded that the ACMSF needed to examine recent scientific evidence prior to making a judgement on the proposals outlined by the FSA. The Chairman proposed that the FSA commissioned an independent review of the current scientific evidence to support the shelf-life limitation of 5 days, with a view to presenting the information to the ACMSF for further consideration in the latter half of 2005.

Information papers

58. The ACMSF is routinely provided with information papers on topics which the Secretariat considers may be of interest to Members. This affords them the opportunity to identify particular issues for discussion at future meetings. Among the documents provided for information during 2004 were:

- Report on the work of the Surveillance Working Group;⁵²
- World Health Organisation Food Safety News Nos. 2, 3 and 4;⁵³
- Food Standards Agency booklet – Starting up: your first steps to a catering business;⁵⁴
- Industry Guide to good hygiene practice: bottled water guide. Chadwick House Publishing; 2001;⁵⁵
- Items of possible interest from the literature;⁵⁶⁻⁵⁸
- Parliamentary Office of Science and Technology. Briefing note No. 193; January 2003: Food Poisoning;⁵⁹
- Results of the LACORS/HPA Study of External Packaging of Raw Meat and Offal from Retail Premises;⁶⁰

- World Health Organisation Workshop on *Enterobacter sakazakii* and Other Microorganisms in Powdered Infant Formula, Geneva, 2-5 February 2004;⁶¹
- Report on the 36th session of the Codex Committee on Food Hygiene, Washington D.C., 29 March – 3 April 2004;⁶²
- *Ad Hoc* and Working Group Membership and Terms of Reference;⁶³
- Committee members;⁶⁴
- Implementation of the Agency's Foodborne Disease Strategy: Annual Update;⁶⁵
- Risk profile: *Campylobacter jejuni/coli* in poultry (whole and pieces);⁶⁶
- List of archived ACMSF papers;⁶⁷
- Updated list of Working Group and *Ad Hoc* Groups membership and terms of reference;⁶⁸
- Risk assessment of *Listeria monocytogenes* in ready-to-eat foods – interpretative summary;⁶⁹
- ACM/718 Update from other advisory committees;⁷⁰
- ACM/719 FSA Foodborne Disease Strategy: Trends in foodborne disease figures;⁷¹
- ACM/720 Items of possible interest from the literature;⁷²
- ACM/721 The present state of foodborne disease in OECD countries;⁷³
- ACM/722 UK publicly funded research relating to Verocytotoxin-producing *Escherichia coli* (VTEC): Update September 2004;⁷⁴
- ACM/723 Controlling *Campylobacter* in the chicken meat chain;⁷⁵

Chapter 3: A Forward Look

Future work programme

59. The Committee will continue work by the *ad hoc* Group on infant botulism to complete the development of food safety advice for chilled and frozen puréed baby foods. The concern will be to ensure that these products, which may not have been heat processed sufficiently to destroy all *C.botulinum* spores present in the raw material, do not give rise to a consequent elevated risk of infant botulism.

60. The Committee will keep itself informed, through its close links with the Food Standards Agency and the Health Protection Agency, of developing trends in relation to foodborne disease. A continuing task will be to respond promptly with advice on the food safety implications of any issues, which may from time to time be referred to the Committee by the FSA. It is anticipated the Committee will report on developments relating to its work with the FSA to review the Agency's *Listeria* advice.

61. Work will continue by the *ad hoc* Group on botulism in cattle on behalf of the Committee to consider the potential human health risk associated with botulism or suspected botulism in cattle, particularly in relation to the spreading of poultry litter on agricultural land.

62. The Committee, through its *ad hoc* Group on the safe cooking of burgers, will review current advice issued by the Chief Medical officer in 1998 on the safe cooking of burgers, in the light of new published evidence available.

63. The *ad hoc* Group on risk assessment will consider whether following a formal structure for the process of risk assessment would assist the work of the Committee; and if appropriate recommend an appropriate structure which might be adopted.

64. The Committee will continue the work of the *ad hoc* Group on emerging pathogens through use of an electronic message board in order to facilitate discussions on emerging issues without the need to convene.

65. The Committee, through its standing Surveillance Working Group, will continue to provide advice as required in connection with the Government's microbiological food surveillance programme and any other surveillance relevant to foodborne disease.

66. The Committee will continue to keep itself informed of Government horizon scanning activities and initiatives, and their potential impact on the ACMSF's future work programme.

67. The Committee will consider the funding of food safety research.

Horizon scanning

68. The ACMSF has continued its work on horizon scanning via the work of 3 *Ad Hoc* Groups which have explored issues relating to imported foods, changing social habits in relation to food, and newly-emerging pathogens.

Imported foods

69. The Imported Foods Group met once in 2004 to follow up on its initial work reported to the Committee in December 2003. The Group considered that further work was required to examine the microbiological safety of food of non-animal origin entering the UK market; role of traceability systems; and formation of a systematic approach to monitoring information on foodborne disease in different countries. The Group also agreed the ACMSF should keep a watching brief on illegal imports. Evidence relating to these three issues will be considered at a meeting of the Group early in 2005. In addition, following a request from the Food Standards Agency, the Group will consider work relating to an independent review of the microbiological risks associated with 'bush' meat currently being undertaken by the Agency.⁷⁶

Changing social habits

70. The Chairman of the *Ad Hoc* Group on Changing Social Habits, presented his report on the Group's work to the Committee in March 2004.⁷⁷ This report contained a number of recommendations for follow up action. Members concluded that links had been usefully demonstrated between a number of inter-related factors, including the decline in food hygiene skills, obesity, changing eating habits, and the loss of food preparation skills, particularly among younger members of society.

71. Members commented that the use in the report of HIV data as a proxy for immunocompromised groups was interesting. However HIV was not a surrogate for all types of immunocompromise. Members wondered whether the HPA could obtain further information on illness in the immunocompromised. The difficulties in linking laboratory data to databases containing patient information were noted. HPA had established links with public health observatories to try and do this and some progress had been made in relation to *Listeria* data.

72. Further comments from members were that data were collected centrally on travel-associated illness; and the elderly with infectious intestinal disease were less likely to consult their GPs so the data might be skewed towards illness in children.

73. Members agreed that good leadership was seen as very important in ensuring proper standards of hygiene in the catering sector. Literacy skills were often not well developed and that staff were thus more likely to follow the example of their managers. It was, of course, important that managers were sending the right messages to staff.

74. The Committee concluded that, as none of the recommendations in the report were directed at further ACMSF work, the FSA should be allowed to consider these, in the light of the initiatives it was already taking. The Agency was requested to return to the Committee at a later date to develop particular points, as appropriate.

Newly-emerging pathogens

75. In 2004, the standing Newly-Emerging Pathogens Working Group met once to consider risks from newly emerging or re-emerging food pathogens. The remit of this Group was to carry out functions of intelligence monitoring, rapid risk assessment and early alerting of the full ACMSF to the possible need for further action.

76. The Group considered that, as groups already existed in the UK and in Europe to look at the issue of newly-emerging pathogens, a virtual Group should be put in place by the ACMSF to provide immediate advice on any emerging developments. In September 2004, an electronic message board was set up, for use by Members, to facilitate discussion of issues without the need to formally convene.

77. The Committee agreed that an audit of the outcome of the message board should be carried out in 2005. The Committee also agreed that Members who were not part of the Group could be provided with access to the message board.

Annex I: Membership of the Advisory Committee on the Microbiological Safety of Food, its Working Groups and its Ad Hoc Groups

Terms of reference	ACMSF	Campylobacter Working Group	Surveillance Working Group
	To assess the risk to humans from microorganisms which are used or occur in or on food and to advise the Food Standards Agency on any matters relating to the microbiological safety of food.	To identify any important gaps and omissions in action taken to reduce <i>Campylobacter</i> in food and food sources and in the knowledge base; and to develop advice which will assist the Food Standards Agency in evolving its strategy for reducing the incidence of foodborne <i>Campylobacter</i> infection in humans.	To facilitate the provision of ACMSF advice to government in connection with its microbiological food surveillance programme and other surveillance relevant to foodborne disease, particularly in relation to the design, methodology, sampling and statistical aspects; and to report back regularly to the ACMSF.
Chairman			
Professor D L Georgala ¹	Former independent scientific consultant. Retired Director of the Institute of Food Research	✓ ²	
Professor W J Reilly ³	Head, Gastrointestinal and Zoonoses Section, Health Protection Scotland	✓ ⁴	
Members			
Dr G R Andrews ⁵	Head of Technical Services, Northern Foods plc	✓	
Mr J Bassett ⁶	Microbiological risk assessor, Unilever Safety & Environmental Assurance Centre	✓	

¹ Professor Georgala retired on 31 March 2004.

² Chaired the *Campylobacter* Working Group until 31 March 2004.

³ Professor Reilly appointed as Chairman on 1 April 2004.

⁴ Chaired *Campylobacter* Working Group from 1 April 2004.

⁵ Resigned on 31 March 2004.

⁶ Appointment commenced on 1 April 2004.

		ACMSF	Campylobacter Working Group	Surveillance Working Group
Dr D W G Brown	Director, Enteric Respiratory and Neurological Virus Laboratory, Central Public Health Laboratory, Health Protection Agency	✓		
Ms S Davies MBE	Chief Policy Adviser, Which?	✓	✓	
Professor M J Gasson	Head of Food Safety Science Division, Institute of Food Research	✓	✓	✓
Dr K M Hadley	Senior Lecturer, Department of Immunology and Bacteriology, University of Glasgow. Honorary Consultant in Clinical Microbiology, North Glasgow University Hospitals NHS Trust, Western Infirmary, Glasgow	✓		
Professor T J Humphrey ⁷	Professor of Food Safety, University of Bristol	✓	✓	✓ ⁷
Professor P R Hunter	Professor of Health Protection, University of East Anglia	✓	✓	
Professor A M Johnston ⁸	Professor of Veterinary Public Health, Royal Veterinary College, University of London	✓	✓	

⁷ Professor Humphrey chairs the Surveillance Working Group.

⁸ Retired on 31 March 2004.

		ACMSF	Campylobacter Working Group	Surveillance Working Group
Mr A Kyriakides	Head of Product Safety, Sainsbury's Supermarkets Ltd	✓	✓	✓
Ms E Lewis	Computer consultant. Consumer representative	✓	✓	
Mr P McMullin ⁶	Senior Veterinarian & Managing Director, Poultry Health Services	✓		
Mr P Mephram	Environmental Health Manager (Policy), Leeds City Council	✓		
Professor S J O'Brien	Professor of Health Sciences & Epidemiology, Hope Clinical Academic Group, University of Manchester	✓	✓	✓
Mr B J Peirce	Caterer	✓	✓	
Mr D J T Piccaver	Farmer	✓		
Professor L J V Piddock ⁶	Professor of Microbiology, Division of Immunity & Infection, University of Birmingham	✓		
Dr Q D Sandifer	Director of Health Improvement, Kent and Medway Strategic Health Authority	✓		
Professor P Williams ⁶	Professor of Microbiology, Dept. of Genetics, University of Leicester	✓		
Dr T D Wyatt ⁸	Consultant Clinical Scientist, Mater Hospital Trust, Belfast	✓		
Mr M Attenborough	Technical Director, Meat and Livestock Commission		✓	

Assessors		ACMSF	Campylobacter Working Group	Surveillance Working Group
Dr L Doherty ⁹	Northern Ireland Department of Health, Social Services and Public Safety	✓		
Mr P J R Gayford	Department for Environment, Food and Rural Affairs	✓	✓	
Dr J Hilton	Food Standards Agency	✓	✓	
Dr G McIlroy	Northern Ireland Department of Agriculture and Rural Development	✓		
Dr S Neill	Northern Ireland Department of Agriculture and Rural Development		✓	
Dr S Pryde	Food Standards Agency (Scotland)	✓		
Mrs J Whinney	Food Standards Agency (Wales)	✓		
Secretariat				
Administrative Secretary Mr C Mylchreest ¹⁰	Food Standards Agency	✓	✓	✓
Administrative Secretary Dr L Foster ¹¹	Food Standards Agency	✓	✓	✓
Scientific Secretary Dr P E Cook	Food Standards Agency	✓		
Administrative Secretariat Mrs E A Stretton	Food Standards Agency	✓	✓	✓
Miss C L Wilkes	Food Standards Agency	✓	✓	✓
Mr S Rahman	Food Standards Agency			
Scientific Secretariat Dr K Callaghan	Food Standards Agency		✓	
Ms G V Hoad	Food Standards Agency			✓

⁹ Resigned December 2004.¹⁰ Retired April 2004.¹¹ Commenced post from April 2004.

Ad Hoc Group on:				
	Imported Foods	Newly-emerging pathogens	Changing social habits (including overseas travel) in relation to food	Sewage sludge
Terms of reference	To assemble information on the current situation on these topics in order to decide whether there is a potential problem in relation to the microbiological safety of food; and to recommend to the ACMSF whether the Committee needs to undertake further action.			
Members				
Dr G R Andrews			✓ ⁵	✓
Dr D W G Brown		✓		✓
Ms S Davies MBE	✓ ¹³			
Dr K M Hadley		✓		
Professor T J Humphrey			✓	
Professor P R Hunter		✓ ¹⁵		✓
Professor A M Johnston	✓			
Mr A Kyriakides	✓	✓		✓
Mr P Mepham	✓ ¹⁴			

¹² This Group, originally set up to offer advice in connection with the disposal of biosolids to agricultural land, subsequently also undertook work on the agricultural disposal of catering waste containing meat, and of manure and abattoir waste.

¹³ Resigned from Chair, and *Ad Hoc* Group March 2004.

¹⁴ Chair from March 2004.

¹⁵ Professor Hunter chairs the *Ad Hoc* Group on Newly Emerging Pathogens.

<i>Ad Hoc Group on:</i>					
		Imported Foods	Newly-emerging pathogens	Changing social habits (including overseas travel) in relation to food	Sewage sludge
Miss L Noddings	Veterinary Surgeon (Portal), Suffolk Coast Port Health Authority	✓			
Professor S J O'Brien			✓		
Mr B J Peirce				✓	
Mr D J T Piccaver		✓			✓
Professor L J V Pidcock		✓			
Dr Q D Sandifer					✓
Dr T D Wyatt					✓ ⁸
Assessors					
Dr J Hilton					✓
Secretariat					
Administrative Secretary					
Mr C Mylchreest ¹⁰		✓	✓		✓
Dr L Foster ¹¹		✓	✓		✓
Administrative Secretariat					
Mrs E A Stretton		✓	✓	✓	✓
Miss C L Wilkes		✓		✓	✓

Ad Hoc Group on:				
	Risk assessment	Infant botulism	Botulism in Cattle	Safe Cooking of Burgers
Terms of reference	To consider whether the ACMSF would be helped by following a formal structure for the process of risk assessment; if so, to recommend an appropriate structure which might be adopted; and to report back with recommendations to the ACMSF.	To consider the potential human health risk associated with the consumption of chilled or frozen, pureed baby foods, particularly in relation to <i>Clostridium botulinum</i> and infant botulism, to inform the development of ACMSF advice to the Food Standards Agency.	To consider the potential human health risk associated with botulism or suspected botulism in cattle, particularly in relation to the spreading of poultry litter on agricultural land. To report back with recommendations to the ACMSF.	To review the current advice issued by the Chief Medical Officer in 1998 on the safe cooking of burgers and to report back with recommendations to the ACMSF.
Members				
Professor D L Georgala	✓ ¹⁶			
Professor W J Reilly	✓		✓ ¹⁸	
Mr J Bassett	✓	✓		✓
Dr M Brett			✓	
Dr D W G Brown	✓			
Ms S Davies MBE	✓			✓
Dr K M Hadley		✓		
Professor P R Hunter	✓ ¹⁷			
Professor A M Johnston				✓
Mr A Kyriakides		✓		✓
Ms E Lewis		✓		
Mr P McMullin			✓	

¹⁶ Chaired the Ad Hoc Group on Risk Assessment until 31 March 2004.

¹⁷ Chaired Ad Hoc Group on Risk Assessment from 1 April 2004.

¹⁸ Professor Reilly chairs the Ad Hoc Group on Botulism in cattle.

<i>Ad Hoc Group on:</i>				
	Risk assessment	Infant botulism	Botulism in Cattle	Safe Cooking of Burgers
Mr P Mepham		✓	✓	
Professor S J O'Brien		✓ ¹⁹		✓
Professor M W Peck	Head, Food Safety Microbiology Section, Institute of Food Research	✓		
Dr M Painter	Health Protection Agency			
Mr D J T Piccaver			✓	
Mr B J Peirce				✓
Dr Q D Sandifer		✓		
Dr M Stringer	Director, Campden & Chorleywood Food Research Association			
Professor P H Williams		✓	✓	✓ ²⁰
Dr T D Wyatt		✓		
Assessors				
Dr J Hilton		✓		
Mr P Gayford			✓	
Administrative Secretary				
Mr C Mylchreest ¹⁰		✓		
Dr L Foster ¹¹		✓	✓	✓
Administrative Secretariat				
Mrs E A Stretton		✓	✓	✓
Miss C L Wilkes		✓	✓	✓
Scientific Secretary				
Dr P E Cook		✓		✓
Mrs O Coffey		✓		
Ms G Hoad			✓	

¹⁹ Professor O'Brien chairs the Ad Hoc Group on Infant Botulism.

²⁰ Professor Williams chairs the Ad Hoc Group on the Safe Cooking of Burgers.

Annex II: Advisory Committee on the Microbiological Safety of Food Register of Members' Interests

Member	Personal interests		Non-personal interests	
	Name of company	Nature of interest	Name of company	Nature of interest
Professor D L Georgala	Unilever plc	Shareholder	None	
Professor W J Reilly	No commercial companies University of Glasgow University College Dublin DEFRA FSA	Occasional fee paid work Occasional fee paid work Occasional fee paid work and Collaborator on grants funded by DEFRA Collaborator on grants funded by FSA	No commercial companies FSA	Health Protection Scotland undertakes the co-ordination of contractual work on the surveillance of food on behalf of the FSA
Dr G R Andrews	Northern Foods plc Chilled Foods Association Environment Agency Sustainable Organic Resources Partnership	Employee and shareholder Chairman Member	None	
Mr J Bassett	Unilever plc	Employee		
Dr D W G Brown	None		Various	HPA industry-funded research and laboratory investigations
Ms S Davies MBE	Which? (formerly the Consumers' Association) ²¹	Employee	None	
Professor M J Gasson	Novacta	Shareholder	Various	IFR Food Safety Science Division industry-funded research projects
Dr K M Hadley	None		None	
Professor T J Humphrey	British Egg Industry Council	<i>Ad hoc</i> consultancy work	Various	Funding for research projects
Professor P R Hunter	Suez International Paris Brita Water Research Institute Various Travel Companies	Chair of Science Advisory Committee Chair of Board of Directors Medical/Legal advice regarding Travel Health	Chambre Syndicale des Eaux Minérales, Paris	Study of Antibiotic Resistance in Food & Water in France

²¹ Ms Davies has additionally declared shares held by her father in Marks and Spencer.

Member	Personal interests		Non-personal interests	
	Name of company	Nature of interest	Name of company	Nature of interest
Professor A M Johnston	Humane Slaughter Association Tesco Stores Ltd	Veterinary adviser Consultant	Various	Independent advice and research involving industry, on behalf of the Royal Veterinary College
Mr A Kyriakides	J Sainsbury plc Sainsbury's Supermarkets Ltd CCFRA Scientific & Technical Committee	Shareholder Employee Chairman	None	
Ms E Lewis	None		None	
Mr P McMullin	Poultry Health Services (PHS) Ltd	Employee and shareholder	Various through PHS Ltd	Consultancy, Veterinary care, Laboratory services
Mr P Mephram	None		None	
Professor S J O'Brien	None		Various	Research funding in collaboration with industrial partners
Mr B J Peirce	None		None	
Mr D J T Piccaver	Defra Research Priorities Group J E Piccaver & Co (Gedney Marsh) Piccaver Farms Ltd QV Foods Ltd Lingarden Ltd Lingarden Flowers Ltd Holbeach Marsh Cooperative Ltd	Member Managing Director Managing Director Non Executive Director Non Executive Director Non Executive Director Chairman. Non Executive Director	None None	
Professor L J V Piddock	Bayer AG	<i>Ad hoc</i> consultancy work	Various	Funding for research projects
Dr Q D Sandifer	None		None	
Dr T D Wyatt	None		None	
Professor P H Williams	None		None	

Member	Personal interests		Non-personal interests	
	Name of company	Nature of interest	Name of company	Nature of interest
Campylobacter Working Group				
Mr M Attenborough	Meat and Livestock Commission	Employee	None	
Ad Hoc Group on Botulism in Cattle				
Dr M Brett	None		None	
Ad Hoc Group on Imported Foods				
Miss L Noddings	None		None	
Ad Hoc Group on Infant Botulism				
Professor M Peck	None		Various	IFR Food Safety Science Division industry – funded research projects
Dr M Stringer	EFSIS Holdings Ltd Campden and Chorleywood Food Research Association Technology Ltd	Director Director	A range of companies from the food and drink industry	Director of Food Technology at Campden and Chorleywood Food Research Association. A portion of the RA's work is funded by the food and drink industry
Ad Hoc Group on Risk Assessment				
Dr M J Painter	None		None	

Annex III: Food Standards Agency/ACMSF contact group on *Listeria* advice

ACMSF members:

Mr Alec Kyriakides
Mr Philip Mepham
Professor Sarah O'Brien

Secretariat:

Dr Paul Cook
Dr Lucy Foster
Mrs Liz Stretton

Annex IV: Advisory Committee on the Microbiological Safety of Food

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Chairman and Members of the ACMSF, its Working and *Ad Hoc* Groups

Dear Chairman and Members

STATEMENT OF INDEMNITY

1. In 1999, the Secretary of State for Health gave an undertaking to indemnify ACMSF members against all liability in respect of any action or claim brought against them individually or collectively by reason of the performance of their duties as ACMSF members. This reflected both the fact that the ACMSF reported to UK Health and Agriculture Departments, and the Department of Health's lead department status.
2. Since 2000, the Committee has reported to the Food Standards Agency and the ACMSF Secretariat consequently asked the Agency to review the original undertaking, to reflect these changed circumstances. The Agency has now given a fresh undertaking of indemnification in its name, which supersedes the earlier undertaking given by the Secretary of State. I attach a copy for information. For ease of reference, I will also arrange for this to be included in the Committee's 2004 Annual Report.

Yours sincerely

By e-mail

**COLIN MYLCHREEST
Administrative Secretary**

INDEMNITY BY THE FOOD STANDARDS AGENCY TO MEMBERS OF THE ADVISORY COMMITTEE ON THE MICROBIOLOGICAL SAFETY OF FOOD¹

1. Subject as provided in paragraph 3 of this document, the Food Standards Agency hereby undertakes with the Members of the Advisory Committee on the Microbiological Safety of Food (“the Members”) to indemnify them against all liability in respect of any action or claim which may be brought, or threatened to be brought, against them either individually or collectively by reason of or in connection with the performance of their duties as Members, including all costs, charges and expenses which the Members may properly and reasonably suffer or incur in disputing any such action or claim.

2. The Members shall as soon as practicable notify the Food Standards Agency if any action or claim is brought or threatened to be brought against them in respect of which indemnity may be sought pursuant to paragraph 1, and if an action or claim is brought, the Food Standards Agency shall be entitled to assume the defence. The Agency shall notify the Members as soon as practicable if it intends to assume the defence and the Members shall then provide to the Agency such information and assistance as it shall reasonably request, subject to all out of pocket expenses properly and reasonably incurred by them being reasonably reimbursed. The Food Standards Agency shall, to the extent reasonable and practicable, consult with and keep the Members informed as and when reasonably requested by the Members in respect of any action or claim. If the Food Standards Agency does not assume the defence of such action or claim, the Members shall keep the Agency fully informed on its progress and any consequent legal proceedings and consult with the Agency as and when required concerning the action or claim.

3. The indemnity contained in paragraph 1 shall not extend to any losses, claims, damages, costs, charges, expenses and any other liabilities:

- (a) in respect of which the Members are indemnified by or through any defence organisation or insurers or;
- (b) which may result from bad faith (including dishonesty), wilful default or recklessness on the part of the Members; or

¹ Members of the Advisory Committee on the Microbiological Safety of Food also includes members of Working Groups and other *Ad Hoc* expert groups of that Committee.

- (c) which may result from any of the following circumstances:
- (i) any settlement made or compromise effected on behalf of the Members of any action or claim brought, or threatened to be brought, against the Members; or
 - (ii) any admission by the Members of any liability or responsibility in respect of any action or claim brought, or threatened to be brought, against them; or
 - (iii) Members taking action that they were aware, or ought reasonably to have been aware, might prejudice the successful defence of any action or claim, once the Members had become aware that such an action or claim had been brought or was likely to be brought.

March 2004

Annex V: ACMSF response to the public consultation on the ACMSF Second Report on *Campylobacter*

ACMSF Second Report on *Campylobacter*

The Advisory Committee on the Microbiological Safety of Food (ACMSF) is grateful for all the comments received in response to the above consultation. The ACMSF has taken all responses into account in advance of publication of the ACMSF Second Report on Campylobacter.

As consultees were invited to comment on the consultation document as a whole, summarised responses were organised by chapter. As part of the outcome to the consultation process, the Food Standards Agency provided some information for inclusion in the responses table which was discussed by the ACMSF Working group on *Campylobacter*. A copy of the published ACMSF response to the consultation is located at <http://www.food.gov.uk/multimedia/pdfs/acmsfcampylosyummm.pdf> or available from the Secretariat.

The final Report has been submitted to the Food Standards Agency to assist development of the Agency's strategy for reducing the incidence of foodborne Campylobacter infection in humans. A copy of the published report 'ACMSF Second Report on Campylobacter (FSA/0986/0605)' is available from www.food.gov.uk.

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