

ADVISORY COMMITTEE ON THE MICROBIOLOGICAL SAFETY OF FOOD

HORIZON SCANNING : CHANGING SOCIAL HABITS

1. Recognising the benefits which flow from horizon scanning, the ACMSF identified 3 topics (imported foods, newly-emerging pathogens, and changing social habits) which might merit detailed attention in the future and set up *Ad Hoc* Groups to do further work. The Groups were charged with assembling information on the current situation on the topics identified, in order to decide whether there was a potential problem in relation to the microbiological safety of food; and recommending to the ACMSF whether the Committee needed to undertake further action.
2. The *Ad Hoc* Groups on Imports, and on Newly-Emerging Pathogens reported to the Committee in December 2003.¹
3. Attached is the Report of the *Ad Hoc Group* on Changing Social Habits. This will be presented by the Group's Chairman, Dr Geoff Andrews. Members views are sought on the Report and its recommendations.

**Secretariat
March 2004**

¹ ACM/665 and ACM/666.

Advisory Committee on the Microbiological Safety of Food

Report of the *Ad Hoc* Group on the impact of social change on future trends in food poisoning

1. The *Ad Hoc* Group was formed following a horizon scanning exercise in 2002. Foreseeable changes in the demographics and lifestyle of UK citizens were identified as possibly influencing the future trends of intestinal disease acquired from food and drink.

2. The *Ad Hoc* Group comprised:

Chair

Dr Geoff Andrews Northern Foods plc

Members

Mr Brian Peirce	Caterer/Hotelier/lecturer
Mrs Patricia Jefford	Head of Environmental and Public Health Services, Gravesham Borough Council
Professor Tom Humphrey	Professor of Food Safety, University of Bristol

Secretariat

Mrs Liz Stretton
Ms Claire Wilkes

4. We were assisted by:

Mr John Pascoe	FSA Economics and Analytical Division
Mr Richard Campbell	FSA Economics and Analytical Division
Dr Sarah O'Brien	HPA, Communicable Disease Surveillance Centre

4. The Group met in January, April and September 2003. After considering a wide range of issues, we identified 6 areas of concern. One of these, imported foods, was identified but, as this is to be considered by another *ad hoc* group, this was not further investigated. The *Ad Hoc* Group on Food Imports under Sue Davies produced their report for the meeting of ACMSF on 4 December 2003.

Areas of Concern

A. Increase in out-of-home consumption and the low skill base in the catering industry

5. The Basic Skills Agency identified the hospitality and distributive industries as employment sectors where employers reported basic skills deficiencies (literacy, numeracy). In a survey, 87% of employers reported severe basic

skills deficiencies. Twenty eight per cent of restaurateurs interviewed (n=88) did not believe that their staff would benefit from developing their basic skills. Thirty per cent of employers did not know where to access basic skills training. The industry employs a significant number of staff for whom English is not their first language and staff had problems with reading health and safety information. Staff with poor language skills tended to be confined to work in the kitchen and away from contact with customers.¹

6. According to the Hospitality Training Foundation (HtF) New Earnings survey, of the ten lowest paid occupations, four are in the hospitality industry – bar staff, catering assistants, kitchen porters and kitchen hands and catering assistants.² The HtF also reported a high turnover of kitchen porters. The catering industry is an accessible industry for low skill workers. Low salaries, low languages skills requirement and high labour turnover make it accessible to refugees and illegal immigrants. Nineteen ninety-six data suggest that 20% of catering staff achieve no “document literacy skills”, compared to 17% in all occupations. Only 17% have advanced literary skills, compared to 23% in all occupations.³

7. The restaurant industry relies on young people; 45% are under 25 years old. Twenty per cent of the workforce possesses no formal qualifications. Many Oriental and Asian restaurants are recruiting their chefs and waiting staff from the Far East and Indian sub-continent⁴ without the requirement for English language skills.

8. The catering industry employs a greater proportion of part time staff than other sectors. Of the staff employed in distribution, hotels and restaurants, typically 60% are full time and 40% part time, compared to 75% and 25% respectively for all occupations.⁵

9. People move in and out of the hotels and restaurant sectors. In the period 1994–2002, only 75-80% of staff in the sector had been working in that sector 12 months before.⁶ Labour is also more mobile within the sector. In 2002, 59% of staff in hotels and restaurants were with the same employer as 12 months before, compared to 76% for all industries.⁶ There is also a greater percentage of non-indigenous staff in hotels and restaurants. In 2002, 17% were of non UK origin (5% other EU member states), compared to 9% in all industries.⁶

10. The average gross annual earnings in the UK for 2001-2002 was about £24,000 but, for catering staff, it was £12,500, and for chefs and cooks £14,400. Ten per cent of chefs and cooks earned less than £170/week (£8,840 for 52 weeks). For all occupations, 10% earned less than £210/week (£10920 for 52 weeks).⁷

11. Out-of-home consumption is increasing, as disposable incomes rise and people choose to do less food preparation in the home. In the UK, it is

estimated that 33% of all meal occasions are now out-of-home. In the USA, the estimate is 50%. Out-of-home consumption is expected to continue to increase.

12. The Communicable Disease Surveillance Centre (CDSC) records outbreaks where more than one household or institution is affected. The setting for the preparation of food takes precedence over where it is served. In the period 1992-2002, food prepared in restaurants, hotels, pub and bars accounted for 43% of all recorded outbreaks. The percentage accounted for by these places increased during the period from 36% to 56%, although the absolute number fell from 83 in 1992 to 31 in 2002.⁸

13. The faults thought to have contributed to an outbreak are recorded by CDSC. Personal hygiene and availability of hand washing facilities have been recorded only since 2001 but show that these were thought to contribute to only 15% of outbreaks. However, poor practice recorded as inadequate heat treatment, cross-contamination, and storage too warm or too long were the dominant causes identified, contributing in about 80% of outbreaks in 1992-1999. However, since 2000, this has reduced to about 60% as overall recorded outbreaks have fallen sharply.⁸

Recommendations:

14. The relatively high turnover of poorly educated and low paid staff who may have little or no English language skills presents a difficulty in communicating food safety messages.

15. Key messages about hand washing, storage, adequate cooking and avoidance of cross-contamination need to be communicated pictorially so that staff without knowledge of written or spoken English can understand them.

16. The communication needs to be regular, probably annual, to catch the flow of new entrants to the labour market.

B. Decline in food preparation/food hygiene skills in domestic kitchens

17. If literacy of catering workers is a concern for the food service sector, then literacy in the general population may have an effect on domestic skills. Since 1995, the number of 14 year olds achieving level 5 or above at Key Stage 3 has increased in teacher assessments from 55% to 66%.⁹ Schools are expected to impart skills that were traditionally imparted in the home. However, only 18% of all pupils in years 10 and 11 were studying home economics in 1996. Those students who were studying home economics received an average of 4 hours of instruction per week.¹⁰ But home economics teachers have much lower specialist qualifications compared to other subject disciplines. In year groups 12-13, 9% of teachers had a degree, compared to 51% in all other subjects, and 42% had a Cert Ed,

compared to 6% in all other subjects.¹⁰ Home economics teachers are exclusively female; by comparison, only 43% of maths teachers are female.¹⁰

18. The convenience food market developed during the 1980s and 1990s. There is now a wide range of “meal solutions” available through all significant food retail chains. This market segment is dominated by chilled foods. In recent years, city apartments have been built with food preparation areas but no recognisable kitchen, reflecting the move away to prepared foods that require only cooking or re-heating.

19. In a survey by the FDF,¹¹ it was found that 45% of all teenagers do not wash their hands after using school toilets, and of these 45%, 40% do not use soap. This means that 67% of this sample either did not wash their hands or did not wash their hands with soap. Use of soap is recognised as essential to reduce microbial loading on hands.

20. Although Public Health Laboratory Service (now the Health Protection Agency - HPA) data show that only 12% of outbreaks originate in domestic kitchens in the period 1992-2002,⁸ other estimates from Europe suggest that 75% of all incidents of foodborne disease originate in the home.¹² The New Zealand Food Safety Authority estimate that the numbers of incidents of food borne disease arising from the home were three times greater than the incidents arising from cafés and restaurants.¹³

21. The incidence of food borne outbreaks has declined sharply in the period 1992-2002 - from 45 to 2 per annum. This may be associated with the decline in *Salmonella* in raw chicken.⁸

22. In 2000-2002, 18% of all people 16 and over experienced food poisoning that they related to food prepared in the home. From data gathered in 2000-2002, of those people aged over 16 who had experienced a bout of diarrhoea or vomiting in the past 12 months, 18% attributed it to food prepared in the home.¹⁴

Recommendations:

23. Although literacy skills are improving, there is an increasing reliance upon the education system to impart skills which were traditionally learnt in the home. The education system probably does not have the capacity to teach food preparation to all students.

24. There is evidence of a lack of knowledge or understanding about hygienic practice amongst children. The Food Standards Agency needs to work with the Department for Education and Skills to find ways of improving food hygiene instruction to all children. This may be via subjects other than domestic science or the Craft Design and Technology curriculum.

25. There is evidence from other sources and countries that the domestic kitchen is a bigger contributor to intestinal disease than current evidence would suggest. The FSA should review the significance of domestically acquired food borne intestinal disease.

C. An ageing population and increases in institutional residences

26. According to the European Food Information Council (EUFIC), susceptibility to foodborne illness increases with age. The reasons given are problems with vision, making it difficult to read preparation instructions or expiry dates, or to notice that a dish or utensil is not clean or that a food has changed colour. The sense of smell becomes less acute with age, so spoiled food may not be so readily identified.¹⁵

27. The proportion of elderly people in the UK will rise significantly as life expectation continues to rise and birth rate falls. In 2003, 16% of the population were over 65, and 8% were over 75. By 2023, this is forecast to be 20% over 65 and 10% over 75. By 2023, there will be 12.6m over 65s and 6.1m over 75s, up from 9.5m and 4.5m today.¹⁶

28. An ageing population, a falling birth rate and a greater participation of women in the work force means that a great percentage of infirm elderly people will be cared for in institutions rather than at home by relatives.

29. The FSA's Food Hygiene Campaign recognises that the elderly in residential homes are an at-risk group.

30. Laboratory reports of *Campylobacter* and *Salmonella* infections in England (rate per 100,000) compiled by HPA CDSC show a lower rate of recorded incidents for 65 year olds, compared with people between 18 and 64 years of age. In the period 1998-2002, the mean rate for *Campylobacter* incidents was 118 per 100,000 for 18-64 year olds, and 76 per 100,000 for those age 65 and over. For *Salmonella* incidents, the rate was 32 per 100,000 for 18-64 year olds and 21 per 100,000 for those age 65 and over. These data are supported by Office for National Statistics notifications of food poisoning in England 1998-2002. In this period, a mean of 177 cases per annum were recorded for the 18-64 years old group, and 108 cases per annum for the 65 years and over group.¹⁷ The proportion of people 16 and over who experienced food poisoning in the period 2000-2002, fell with advancing age from 19% for 16-25 year olds to 9% for 50-65 year olds and 4% for those over 66.¹⁴ It is possible that the current elderly population grew up in a less hygiene-conscious society and therefore developed a more robust immune system. We did not try to validate this possibility.

Recommendation:

31. Environmental Health Officers should continue their vigilance of hygienic practices in food preparation areas of nursing homes.

32. The evidence suggests that elderly people are less susceptible to food borne disease than younger parts of the populace. However, with different dietary and hygiene experience of different generations, this may not be sustained. FSA should monitor the incidence of food borne disease amongst the elderly to identify the emergence of any rising trend.

D. Increase in the immuno-compromised populace

33. We were unable to obtain any data on the trends on the number of immuno-compromised people living in the UK. However, the number of HIV immuno-compromised people has increase from 22,800 in 1997 to 39,400 in 2002. The trend continues upwards. Deaths from HIV/AIDS continue to fall, but the rate of infection has increased significantly since 1997.¹⁸

Recommendation:

34. HPA laboratories should monitor the incidence of food borne intestinal disease amongst immuno-compromised patients to identify whether these are a specific risk group. If so, it may be appropriate to target this group with specific food hygiene messages.

E. Food safety standards in EU Accession Countries

35. It is clear from speeches by senior EU officials that there is concern about the speed at which Accession Countries will meet EU food safety standards. In May 2001, David Byrne, Commissioner for Health and Consumer Protection said *"It is clear that the food safety area represents a major challenge in the accession preparations. The Community will be insisting that the candidate countries ensure coherent transposition, implementation and controls throughout the whole food chain so that food safety is not compromised. A high level of food safety in the whole of the enlarged Union is crucial for the functioning of the internal market and for the preservation of consumer confidence"*.¹⁹

36. In May 2002, the same Commissioner identified "three areas of key concern in the context of enlargement in relation to food safety" These were

"1. A major shift in the geographical borders of the Union. Some current external borders will become internal borders and thus will consequently disappear as the single market develops. But new external borders will be created and it is essential that a revised network of Border Inspection Posts is fully effective to guard against potential threats from imports to public health, animal health and plant health within the Union.

2. *The Union has recently adopted fundamental and comprehensive rules for the prevention, control and eradication of TSEs (transmissible spongiform encephalopathies). It is essential from a public health perspective that Candidate Countries adopt and enforce the same rules applicable within the Union, prior to accession.*

3. *Much needs to be done as regards the upgrading of agri-food establishments in the Candidate Countries to the required EU standards. A number of transitional periods to allow for the required conversion have been requested in this respect. I have, however, made it clear that any such transitional periods must only concern specified structural deficiencies, but not matters of hygiene and control. There will be no compromises when it comes to public health.*"²⁰

37. In October 2002, Paola Testori Coggi of the EU Health & Consumer Protection DG raised food safety issues arising from changes in borders, TSE controls, and standards of meat processing plants in the Accession countries as potential threats to food safety in the EU.²¹

38. In summary, senior EU officials recognise a risk arising from the failure of accession countries to meet EU food safety standards. Where temporary derogations have been negotiated, manufacturers and processors may continue to produce for their home market. However, border controls will not prevent products intended for the home market entering other Member States.

39. The EU will have new borders where the accession countries border non-EU states. These borders are likely to be porous.

Recommendations:

40. The FSA should work with the European Food Safety Authority (EFSA) and Member States' food safety authorities to prevent free trade in foods of EU origin that do not conform to EU food safety standards.

41. The FSA should work with the EU and EFSA to understand whether there are new threats to food safety arising in those countries that lie immediately beyond the new borders of the EU.

F. Increased international travel

42. Holidays outside the UK have increased from 4.1m in 1971 to 36.7m in 2000, with forecasts of further growth. Most of these have been taken within Europe, Turkey and the USA. The percentage of trips to other destinations has remained fairly constant at 12-19%.²² When business travel is added in, visits abroad rose from 46m to 58m between 1997 and 2001.²³ The volume of traffic is growing at about 7% per annum. Nineteen per cent of arrivals

were from countries other than the USA or European nations (EU and non-EU).²⁴

43. In the IID study, travel outside northern Europe was associated with an increased risk of intestinal disease.²⁵ In a study of 1,469 tourists, 26% reported travellers' diarrhoea.²⁶ The proportion of laboratory-confirmed cases of *Salmonella* associated with travel abroad increased from 12% in 1992 to 19% in 2002.⁸ In the same period, campylobacteriosis acquired abroad doubled from 10% to 20% of reported cases.²⁷ Although the incidence of *Salmonella* Typhi, *Vibrio cholerae*, *Shigella.boydii* and *Sh. dysenteriae* are low,²⁸ they are normally associated with foreign travel especially in Africa or Asia.

Recommendations:

44. HPA laboratories should monitor the incidence of food borne intestinal disease amongst returning travellers to identify whether there are specific risk destinations. Targeted hygiene messages may be appropriate.

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