

**ADVISORY COMMITTEE ON THE MICROBIOLOGICAL SAFETY OF FOOD****EPIDEMIOLOGY OF FOODBORNE INFECTIONS GROUP (EFIG)**

1. The most recent meeting of this group was held on 30 October 2007.

**Review of animal data for January – June 2007**

2. Over the year there has been a decrease of over 30% in reports of *Salmonella* in animals, with larger reductions in poultry reports (59% in chickens and 53% in turkeys). However, this must be viewed in the light of a 40% decrease in submissions, again with a greater decrease in poultry submissions. The poultry reports may also have been affected by changes in reporting of hatchery isolations.
3. Reports of *Salmonella* Enteritidis fell over the six month period. The main phage types isolated from layer flocks mirrored those found in the laying flock survey conducted under the EU Zoonoses Directive. Following an increase in the last 6 months of 2006, reports of *Salmonella* Typhimurium (STm) fell by 56%, with only one report from chickens. Reports from both cattle and pigs, which had shown an increase in 2006, decreased.
4. An early detection system has been instituted to detect signs of increased reporting for individual serotypes. This system triggered 1 flag in the first 6 months of reporting, which was then followed up to see whether it indicated any noteworthy event. This turned out to be a one-off event which registered because the isolate in question (pentavalent resistant *S.Anatum* from a calf with diarrhoea) had not previously been reported on the database

**Review of human data for January – September 2007**

5. *Salmonella* reports are continuing to show a levelling off with relatively little change in incidence since 2005. *Campylobacter* reports have increased in 2007 after four years of relative stability. The current 2007 reporting rates are similar to the rate of reporting in 2002. *Listeria* reporting rates have again risen and are currently at a similar level to the peak seen in 2003 (2004 in Scotland). After peaking across the UK in 2006, current indications are that reporting rates for VTEC O157 have returned to levels seen between 2003 and 2005. However, the high rates seen in Scotland in 2006 are continuing into 2007. The trends are otherwise broadly similar across GB. In Northern Ireland, however, rates of *Campylobacter* and *Listeria* have continued to decrease.
6. Within the *Salmonella* figures, there has been little change in reports of *S.Typhimurium* or *S.Enteritidis* in any of the four countries. However, reports of *S.Typhimurium* DT104 have continued to fall since 2000.

7. HPA has been carrying out an analysis of the age profiles for *Campylobacter*. There has been a decrease in reports in infants since 2000 but an increase in the over 60s. Further analysis of this will be presented to EFIG at its next meeting.
8. The number of outbreaks continues to decrease, with 22 outbreaks reported in the first 9 months of 2007 (compared with 66 for the whole of 2006), only 3 of which were reported to be due to *Salmonella*. Of 55 line listed outbreak reports since 2006, 28 were due to *Salmonella* (51%). A food vehicle/source was identified in 34 outbreaks (62%). The most frequent vehicle/source was shellfish (11 outbreaks). However, this may reflect good ascertainment of these outbreaks due to close working between CEFAS and HPA. Eggs or egg-based dishes were reported as vehicle/source in 9 outbreaks, and no other food vehicles/sources featured in more than two outbreaks.

### **VT-producing *E.coli***

9. An informal meeting on sorbitol-fermenting *E.coli* O157 had been held in Scotland and a report of this meeting is awaited. There still remain questions about the detection of these organisms, their pathogenicity and their derivation. VLA are hoping to develop methods for screening in animals

### ***Campylobacter***

10. Further data from the *Campylobacter* case control study (reported at the last meeting) was presented and members discussed the clear association between disease and use of proton-pump inhibitors. Given the earlier information on the increase in *Campylobacter* in the over 60s, it was thought that more attention needed to be given to this. *Campylobacter* is able to survive at the lower levels of acid produced by proton pump inhibitors as compared with H2 inhibitors, suggesting that gastric acid may have an important role in controlling *Campylobacter* infection in the normal everyday situation.
11. Outputs from the *Campylobacter*, *Helicobacter* and Related Organisms (CHRO) conference were discussed. There was relatively little new data. MLST was generally felt to be the current method of choice with some positive mapping of human to poultry types. However, this is not always the case and there are issues about the relationship between genotypes and phenotypic characteristics, particularly in relationship to detection and isolation methods. In discussion, it was agreed that we should try to ensure that human *Campylobacter* isolates identified during the IID2 study and isolates from the poultry meat survey are MLST-typed so that they can be compared with isolates from the broiler flock survey.

### ***Salmonella***

12. With a couple of notable exceptions, cases of non-PT4 *Salmonella* Enteritidis have decreased from a peak in 2004. The proportion of cases ascribed to foreign travel have also increased again. The main exception to this trend is

S.Enteritidis PT8, where cases have increased and the proportion ascribed to foreign travel have decreased. The main increase has been in London, and the SE and East of England. HPA is currently designing a study to investigate this.

### **Other items**

13. Papers were presented on antimicrobial usage, the *Salmonella* Senftenberg outbreak and its association with fresh basil, food surveys including the catering egg survey (no new results), National Control Plans for *Salmonella* in breeding and laying flocks, updates on EU layer (part B risk factor analysis) and broiler surveys, the HPA review of surveillance systems and the foodborne disease strategy review workshop. A number of these issues were considered at the September meeting of ACMSF.

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