Minutes of the last meeting (February 2025)

ACM/MIN/108

MINUTES OF THE MEETING OF THE ADVISORY COMMITTEE ON THE MICROBIOLOGICAL SAFETY OF FOOD (ACMSF) - HYBRID MEETING HELD ON 6th FEBRUARY 2025 (ONE-HUNDRED AND EIGHTH MEETING) AT 1.00PM IN BROADWAY HOUSE, LONDON (TOTHILL STREET, WESTMINSTER, LONDON, SW1H 9NQ).

Attendees:

Chair:	Professor Charles Keevil
Members:	Dr Rohini Manuel
	Dr Edward Fox
	Ms Claire Tomaso
	Dr Nicol Janecko
	Professor Cath Rees
	Professor Andrew Page
	Dr Adri Bester

	Professor Linda Scobie
	Mr Martin Briggs
	Dr Dragan Antic
	Dr Inaki Deza-Cruz
	Dr Wayne Anderson (closed session only)
	Professor Francis Butler
	Mr Andrew MacLeod
	Dr Roberto Vivancos
Apologies for absence:	Dr Jane Gibbens
	Ms Azuka Aghadiuno
Secretariat:	Dr Anthony Wilson
	Dr Lauren Adams
	Ms Archana Gadaria
	Ms Carol Scott
FSA:	Dr Mindy Dulai
	Dr Wioleta Trzaska

	Dr Erica Kintz
	Ms Amy Hale
	Dr Lorcan Browne
	Robin May (Attended for agenda item 4)
Representatives:	Amy Douglas (UKHSA)
FSS:	Svetlozara Chobanova
	Karen Pearson
Observers:	Karin Goodburn (Chilled Food Association)
	Nicola Wilson (Samworth Brothers)
	Amber Barton
Presenters:	Anne Gravett (FSA)
	Mohammed Din (FSA)
	Bukola Onarinde (University of Lincoln)

1. Welcome

The Chair (BK) welcomed ACMSF members and members of the public. BK also welcomed guest presenters Anne Gravett (AG) and Mohammed Din (MD) who will

be attending the open session to present agenda item 7. Bukola Onarinde from the University of Lincoln was also welcomed as the presenter of agenda item 9. Mindy Dulai (Head of FSA Risk Assessment Unit) and Chief Scientific Advisor (Robin May) were also welcomed to the meeting. Attendees were informed of the housekeeping rules.

2. Apologies for absence

Jane Gibbens and Azuka Aghadiuno

3. Declaration of interest

The Chair asked if members wished to declare any potential conflicts of interest associated with the meeting agenda items. No conflicts of interest were declared.

4. Message from Chief Scientific Advisor (Robin May)

Chief Scientific Advisor, Robin May (RM), was invited to speak on behalf of the committee to mark BK last ACMSF meeting as Chair. RM thanked BK for his outstanding contribution to the committee, as well as subgroups.

5. Minutes of 107th ACMSF meeting ACM/MIN/107

Members approved the minutes of the 107th meeting. The Chair and members highlighted minor typographical edits needed before publication on the ACMSF website. (**Action 5.1**)

6. Matters arising ACM/1439

Lead Secretariat, Anthony Wilson (AW), presented Matters arising paper ACM/1439.

Summary of actions:

- **5.1a (complete)**: Minutes of the 106th meeting accepted as an accurate record and published on the ACMSF website.
- **5.1b (complete)**: Secretariat produced and published a report on ACMSF members opinion on current scientific evidence in relation to the *Listeria* regulations by the European Commission.
- **7.3 (complete)**: Questions were raised during the 107th meeting public forum, which have been addressed. This included queries regarding *Clostridium botulinum* and bacterial phage work. Policy colleagues have

responded which included the following: The FSA guidance was last reviewed and published in December 2020. There will be further leading guidance on botulinum later this year. A cross-government initiative led by the MHRA is underway to align regulation on the use of phage, potentially including food safety. The FSA is involved in this initiative.

- **9.3 (complete):** At the 107th meeting the Chair stated that the FSA should be checking to see what follow up was carried out by local authorities (LAs) for positive isolates from the raw pet food survey. LAs were only notified of positive Salmonella results from the survey by the FSA Feed delivery team. The FSA were not able to provide instructions to LAs on action to take for positive results because Commission Regulation (EC) No 152/2009 of 27 January 2009 laying down the methods of sampling and analysis for the official control of feed is not considered suitable for microbiological samples. Any samples taken are generally considered informal. LAs are not obliged to inform FSA of actions they have taken on informal samples. The decision to act, and what action to take, was left to the LAs to decide. The FSA Feed delivery team do know that some LAs followed up the results with feed businesses and in some cases notified the FSA of a Salmonella incident
- **11.2a and 11.2b (complete):** Members had queried sampling and testing regarding the PATH-SAFE FBD presentation at the 107th meeting. It was confirmed that quantitative PCR is not being carried out at NHS Lothian for bacterial pathogens, however, norovirus is being sequenced at UKHSA. Furthermore, pre-treatment sewage influent is being sampled at the sewage treatment plants. The sample sites are all in areas of higher population density. However, it may be there are some agricultural run-offs at some of the sites being used.
- **13.2 (complete):** Secretariat amended and published the ACMSF Horizon Scanning Workshop (June 2024) report. The report was also discussed in the FSA's Climate Adaptation Report. FSA's response to climate adaptation | Food Standards Agency
- **5.7:** Matter arising from 106th meeting. IID3 lead, Erica Kintz, confirmed that the FSA has now received a report from the contractors which has included lessons learned and the challenges faced in terms of the regulatory approval process. This will be passed to the Chief Scientific Advisor for further action, if necessary.

7. Root Cause Analysis

Anne Gravett (AG) from the FSA, alongside Mohammed Din (MD), presented and discussed the work the Incident Prevention Team has produced in terms of Root

Cause Analysis.

Root Cause Analysis (RCA) is a collective term for several structured methods used to resolve and reduce the number of incidents, issues, failures and complaints during manufacture and other environment. AG highlighted the importance of RCA and the history of RCA within the FSA: since 2015, all incidents in England have a RCA request. The benefits of RCA include but are not limited to:

- Promoting improvements
- Ensures the use of corrective measures
- Sharing of incidents ‘lessons learned’ across FSA and industry

There is RCA guidance available to businesses and LAs as well as online learning modules. The FSA has promoted the use of RCA during incidents, and results and trends identified via RCA are reported annually.

The data incorporated into RCA includes allergy alerts, allergen incidents, pathogenic microorganisms’ incidents, foreign body incidents, and product recall notice incidents. The identity of Food Business Operators (FBOs) also remains anonymous to the public and is not published.

AG provided data on how many incidents have used RCA and gave an example of microbiological RCAs received. AG highlighted that data can often be of poor quality due to a lack of standardisation within the field. Furthermore, there is a need for robust Technical Working Groups, who focus on specific technical issues.

AG explained that the FSA/FSS have a RCA Steering Committee which aims to use RCA for incidents and prevention, and that the Technical Working Group responds to the committee. Lessons learned workshops have also taken place, such as STEC O145 in salad leaves.

After the presentation, committee members were invited to ask questions or provide comments, which resulted in a thorough discussion. BK commented on linking persistent detection of pathogens with the formation of biofilms via RCA. AG responded that RCA involves a breadth of data that can be useful when analysed and interpreted appropriately. Therefore, RCA can allow questions to be asked and prompts discussions that may lead to alternative answers and solutions.

Roberto Vivancos (RV) asked whether root cause analysis reports are available, and it would be interesting to reflect upon the STEC outbreak in salad leaves, particularly because identifying the exact source of an outbreak is extremely

difficult and rarely happens. AG expressed that the application of RCA still carries a lot of uncertainty (precautionary principle as epidemiological studies carried out by public health).

Francis Butler (FB) also commented that it is extremely difficult to determine the true root cause of a microbiological outbreak, especially at an industrial level: hence, many cases of root cause is opinion based rather than evidence based. FB then queried how this was being handled in the FSA database and how is artificial intelligence (AI) being incorporated. AG agreed that it often difficult to find the root cause, which is why the process of developing and implementing has been reflective to ensure food safety management systems are robust and it is flagged when things go wrong. Anthony Wilson (AW) also commented that there is an important difference between root cause and source attribution.

8. Highly Pathogenic Avian Influenza B3.13 ACM/1440, 1441 and 1442

Lorcan Browne (LB) presented three risk assessments (RA) produced by the Microbiological Risk Assessment (MRA) at the FSA. LB provided background on Highly pathogenic Avian Influenza (HPAI) B3.13 circulating in the United States of America (USA).

- HPAI H5N1 clade 1,3,4,4b genotype B3.13 has been circulating in USA dairy herds since January 2024
- Dairy cattle have exhibited clinical signs e.g., inappetence, reduced milk production
- In March 2024, the virus was detected in milk.
- Severity in humans is mild (although limited data is available)

The first RA was an update to a RA published in May 2024, regarding the risk to UK consumers from imported US dairy products. The updated RA published in February 2025 was expanded to also consider the risk to UK consumers from imported US beef and beef products, as well as dairy and colostrum-based products.

Milk from infected cattle can contain high levels of live virus; milk can appear thickened and yellow. Based on available data, the infectious dose was also determined to likely be very high (approximately 10^7 TCID) (uncertainty). The level of risk associated with imported milk and milk products was negligible; thus, the level of risk was reduced from very low in the May 2024 RA. The risk was

lowered as more evidence confirmed that the virus is susceptible to heat treatment and normal pasteurisation methods can reduce infectious load. Additionally, the US Animal and Plant Health Inspection Service (APHIS) confirmed that all US exported dairy products are pasteurised (except for aged cheeses).

Furthermore, the probability that UK consumers will receive infectious exposures to HPAI via imported US beef and beef products was also negligible. This was due to no virus being detected in muscle associated with ‘usual’ cuts and joints of beef as well as the effectiveness of cooking temperatures in reducing infectivity of virus. Additionally, US beef accounts for a small proportion of meat consumed in the UK (0.0024%). The assessments were made with medium uncertainty, and the key uncertainties were as follows:

- Effects of aging on viral activity in cheese made from unpasteurised milk
- Hazard characterisation included information regarding similar strains due to lack of B3.13 information
- Lack of surveillance for virus in US beef herds

The second RA focused on the hypothetical risk to UK consumers from exposure to HPAI on a per portion basis of milk and milk products, if the virus was detected in UK dairy herds. Using the level of infectious virus detected in US bulk milk (6.3log 10 EID50/ML), as worse-case scenario, a glass of pasteurised milk is likely to have a low level of infectious virus (approx. 1.86 log 10) which is approximately 1,000 times lower than the hypothesised threshold needed for infection. Therefore, the risk from pasteurised cow’s milk and dairy products made from pasteurised milk was assessed as negligible with medium uncertainty (the same as pasteurised milk from the US).

However, Raw Cow’s Drinking Milk (RCDM) and products made with raw milk are permitted for sale in England, Wales and Northern Ireland via registered farms. Using the level of infectious virus detected in US bulk milk (6.3log 10 EID50/ML), as worse-case scenario, a glass of RCDM milk is likely to have a high level of infectious virus, which is approximately 31 times higher than the hypothesised threshold needed for infection. Therefore, the assessment determined the probability of UK consumers being exposed to infectious levels of virus per portion of RCDM and products made with raw milk to be medium. The uncertainty in the risk levels for RCDM and unpasteurised milk products was High. This is primarily due to lack of confirmed cases traced back to food consumption, and the uncertainty around viral load needed to cause infection from consuming RCDM and dairy.

The third RA assessed the hypothetical risk to UK consumers from exposure to HPAI via a portion of beef, if the virus was detected in UK herds. US studies found viable virus in small proportion of postmortem muscle and offal (kidney) samples (0.5-1%). In beef offal, 2.8 log TCID50/ml of virus has been detected in lung samples and 7.3-7.8 LogTCID50/ml virus has been detected in mammary glands. It has not been detected in ground beef at retail. Furthermore, studies show cooking temperatures (even as low as 49°C) effectively reduce virus in food by approximately 2.5 log10. Therefore, risk was assessment as negligible with low uncertainty.

Members of the committee stated that offal can be used in raw pet food and whether this should be considered a risk. LB and AW highlighted that FSA policy had determined raw pet food was out of scope for the RAs produced: however, it is a very important question to consider. A conversation was also held regarding the disruptive nature of the USA data sharing restrictions; had the restrictions been in place during data collection

9. Transmission of AMR Campylobacter and *Escherichia coli* during the processing of chicken meat – reserved business

10. EFIG summary report – reserved business

11. IID3 update – reserved business

12. Committee updates – reserved business

13. Any other business – reserved business