DEFRA ANTIMICROBIAL RESISTANCE CO-ORDINATION (DARC) GROUP
MINUTES OF FIFTY-NINTH MEETING
01 June 2016, 11:00-16:00

Present: Agri-Food and Bioscience Institute (AFBI)
Animal and Plant Health Agency (APHA)
Centre for Environment, Fisheries and Aquaculture Sciences (Cefas)
Department of Agriculture, Environment and Rural Affairs (DAERA)
Food Standards Agency (FSA)
Health Protection Scotland (HPS)
Public Health England (PHE)
Scottish Government (SG)
Scotland's Rural College (SRUC)
Veterinary Medicines Directorate (VMD)
Welsh Government (WG)

1. Update on Recent Findings: 01 March-30 April 2016

1.1 England & Wales -

- Reports of *Salmonella* Typhimurium 4,5,12:i:- increased by 45% (16 vs. 11 incidents), while reports of *S.* Typhimurium 4,12:i:- decreased by 76% (5 vs. 21 reports) compared with the same reporting period in 2015.
- *S.* Ajiobo was identified in a 7 week old Labrador puppy. The isolate was resistant to ampicillin, cefotaxime, ceftazidime and amoxicillin/clavulanate.
- Ten monophasic Typhimurium (4,5,12:i:-) isolates collected from the same premises at an approximately two month interval were examined by whole genome sequencing. In 6/10 isolates the beta-lactamase enzyme HERA-3 has been detected.
- Three cases of *Klebsiella pneumoniae* were detected in free living seals off the East coast. Two seals died shortly after collection; one due to a large abscess on the neck and the other due to a navel abscess that ruptured internally. The *K.pneumonia* isolates were ST11 and ST398 and were considered likely to have been acquired from the marine environment.

1.2 Northern Ireland -

- Five *Salmonella* Typhimurium and 6 monophasic *Salmonella* Typhimurium were isolated from pork products such as sausage and gammon; isolates were resistant to a number of antimicrobials; the common resistance profile was AmpStrepSulTrim, however some DT193 *S.* Typhimurium were also ciprofloxacin resistant.
- *S.* Goldcoast was identified in a pig faecal sample. This isolate was an ESBL producer, and presented with resistance to antibiotics including ampicillin, sulfadiazine, trimethoprim, in addition to ciprofloxacin and gentamicin.
- 9 out of 107 calves tested positive for ESBL producing *E. coli* – a slight increase from the same period last year. *Cryptospodium* was isolated in 4 calves, alpha-haemolytic *Streptococcus* spp. from 1 calf, and *Streptococcus* spp. from 1 calf.
- 1 *Salmonella* Mbandaka was identified in animal feeding stuff.

1.3 Scotland -

- *Salmonella* Minnesota was identified in 3 different farms resulting in 13 sheep abortions. Twelve isolates were recovered from two of the farms and eleven were fully sensitive with the other showing resistance to SXT only. The single isolate from the third farm carried resistance to seven antibiotics. Geese have been suggested as a potential source.
- MRSA CC8 (*spa* type: t088) was identified in ten nasal swab samples of macaques in Scotland.

2. LA-MRSA

2.1 The VMD updated the group on the progress of Livestock Associated MRSA (LA-MRSA) surveillance.

There have been two LA-MRSA findings that triggered ResAlerts since the previous DARC meeting; one from a turkey and one of bovine origin. The turkey case has been published in Issue 14 of the Veterinary Record; Veterinary Medicines Update. The bovine case was identified as an English isolate, tested in Scotland. *S. aureus* was deemed the causative organism responsible for an abortion in a beef cow (second calver). The presentation was regarded as unusual because MRSA is rarely reported as causing clinical disease apart from mastitis in cattle. There were limited history of farm imports and/or spread of slurry from other farms onto this farm. An update has been published in Issue 1, Volume 179 of Veterinary Record.

2.2 There has been recent renewed interest from journalists regarding LA-MRSA and its source. Veterinary schools have also shown increasing interest and are highly aware of the matter.

Two guidance documents have been published on GOV.UK; one for people who work with livestock and one for people who work in abattoirs. The industry sectors have also suggested that a document detailing biosecurity guidance to reduce incidence of LA-MRSA should be written; a draft document has been generated and circulated to each sector for comment.

3. R&D

The VMD funded PhD with SAVSNET has commenced. SAVSNET is an initiative from the British Small Animal Veterinary Association and the University of Liverpool for monitoring disease in companion animals using data from veterinary practices and laboratories.

3.1 One aspect of the VMD R&D funding is to support the core surveillance capabilities at APHA. In 2016/17 VMD will continue to fund VM0506, and in 2017/18 a single over-arching research project with APHA will be developed which will have sub themes.

3.2 In addition VMD have identified 3 key topic areas for the 2016/17 research call:

- Antibiotic usage in horses, camelids and exotic pets
- Evidence-based decision making in veterinary prescribing
- Prescribing practices and their association with the development of resistance

Priorities of the research call are UK-focussed and have taken into account existing research calls.

The O'Neill review highlighted the importance of diagnostic testing to limit antibiotic use. The Longitude Prize was also raised as a positive contribution to AMR R&D, with a £10m prize fund awarded to a competitor that can develop a point-of-care diagnostic test that will conserve antibiotics.

The European Joint Programming Initiative was also to the attention of the group. AMR will be one of 3 broad themes of the initiate and PHE have agreed to contribute.

4. ResAlert Contingency Plan

4.1 VMD proposed updates to the ResAlert contingency plan. Discussions focussed on determining and prioritising the diagnostic tests required, identifying the hazard and risk to human health, and formalising a simple communication system to disseminate information. An initial draft of the proposed updates was circulated to members.

5. EU Update

5.1 A CVMP Update Paper updating the DARC group on the progress of the CVMP strategy on antimicrobials was circulated prior to the meeting. Of importance, the CVMP endorsed the draft Antimicrobial Advice ad hoc Expert Group (AMEG)'s updated scientific advice to the Commission on: *The use of colistin in animals in the EU: development of resistance and possible impact on human and animal health*.

6. Review of DARC Meetings

6.1 The VMD presented the findings from the survey of DARC members that was conducted between January and March 2015. Topics discussed included the purpose, structure, content, membership and practicalities of DARC meetings.

7. Independent Review on AMR

7.1 The UK government will take forward the actions raised from the Independent Review on AMR as mandated by the present government's manifesto commitment. Main animal health-related recommendations from the paper were: countries to commit to overall country levels on mg/kg basis (using ESVAC methodology), reduce antibiotic usage based on a target of 50mg/kg with a 10 year horizon, set species-level sector targets, stewardship of Critically Important Antimicrobials (CIAs) for human health, and the need for an international agreed set of CIAs and their usage in animals.

Reference to recommendations has been made by the Prime Minister at the G7 summit, elaborated on in more detail in a press release published on GOV.UK. The full government response is expected to be published before summer parliamentary recess.

The Independent Review will help to feed into ongoing international AMR discussions, with an AMR high level meeting and a UK side event on AMR planned at the United Nations General Assembly in September 2016.

8. Update on Consumption Data Projects

8.1 The VMD provided an update on the progress of consumption data projects.

The ESVAC vison and strategy 2016-2020 document is published on the EMA website for public consultation and sets out the priorities of the ESVAC team for the next four years. These are namely; continuing with sales data reporting as core activity with an aim to have all European countries contributing, collection of consumption data by species, and stratification of sales data as an interim measure whilst consumption by species is being established. ESVAC will run a feasibility study to determine if stratification is possible and this will enable further analysis alongside resistance data in the next JIACRA report.

At a recent species expert advisory group meeting, draft guidance regarding collection of antimicrobial usage data was discussed. Implementing the lessons learnt from the 2014 pig protocol ESVAC trial, a concept note has been drafted to introduce the minimum data that will be required by ESVAC, based on a full coverage data collection model and this has been published on the ESVAC page of the EMA website for public consultation. Guidance based on the principles of the concept note will be drafted and published for comment by the end of 2016/early 2017. This guidance will be for data collection in the major livestock species (pigs, poultry, cattle) with species specific sections discussing production groups from which data should be collected and assigned, in addition to denominator data. A call for data will be released in 2018, and reporting will be annual.

11.2 In terms of national data collection systems;

Pigs: eMB-Pigs launched on 20 April 2016. AHDB have promoted the system through press releases and attendance at NPA regional meetings and the pig and poultry fair. The 6 month review will include discussion on the benchmarking facility which is not yet live on the system, and which indicators to use.

Poultry: The British Poultry Council (BPC) has published an antibiotic stewardship group report, demonstrating a further decline in usage between 2014 and 2015. BPC has agreed to supply narrative text to discuss data trends for inclusion in UK-VARSS.

Cattle: The first meeting of the Cattle AMU data collection steering group is to be held on 14 June 2016, with the aim to agree Terms of Reference for the group and to draft a work plan for the collection of usage data from the dairy and beef sectors.

Other: VMD funded a small project with the VetCompass team at RVC in 2015, a paper has now been drafted reporting on the analysis of companion animal antibiotic usage data collected from veterinary practice software, and will be submitted to Vet Record shortly.

9. Summary of International Collaborations

9.1 Members presented findings from recent international collaborations.

10. Updates from Past and upcoming Events

13.1 The AMR International Science Summit was held on 26-27 April 2016, and presented the opportunity to convene scientists and specialists from all countries to discuss policy interventions.

13.2 An international policy event was hosted on 12 May 2016, sponsored by Prince Charles, and chaired by the CMO and CVO. The event brought together policy-makers from both human and animal health, with much discussion concerning the forthcoming UN General Assembly.

13.3 An event on 29 June-1 July 2016 will be hosted by Wilton Park and focuses on a One Health approach to building AMR national action plans in middle and low income countries.

11. AOB

14.1 An article concerning transmission of *mcr-1*-harboring *E. coli* between companion animals and humans was circulated prior to the meeting. The group briefly raised questions as to the possible route of transmission with no selection pressure evident.

12. Date of Next Meeting

Wednesday 21st September 2016

[Close]