AMR situation analysis and monitoring systems in veterinary medicine in the UK

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Recent Global Initiatives

- WHA resolution
- WHO action plan
- OIE resolution
- FAO ‘resolution’
- GHSA action plan
European Union

1. EU Action Plan
2. Revised Regulations
3. National Plans
Communication from the Commission to the European Parliament and the Council

Action plan against the rising threats from Antimicrobial Resistance

COM (2011) 748
UK Five Year Antimicrobial Resistance Strategy
2013 to 2018

The ecoantibio 2017 plan advocates cautious, rational antibiotic use and is hinged around

Quantitative objectives:
Reduce antibiotic use in veterinary medicine by 25% in 5 years: only strictly necessary and appropriate amounts should be prescribed and administered to animals.

Qualitative objectives:
Focus particularly on reducing the use of critically important antibiotics in veterinary medicine and, in particular, fluoroquinolones and third and fourth-generation cephalosporins.

Drivers of Enhanced Selection and Maintenance of Antibiotic Resistance

- Poor prescribing
- Counterfeits
- Globalisation
- Inappropriate dosing
- Slow diagnostics
- Market disincentives
- Variable regulation/guidance/education
The Three Key Pillars of National and International Strategies

1. Optimal Stewardship to prolong active life of what we have

2. Prevention of spread of resistance

3. Develop alternatives
2 = Strengthen the regulatory framework
3 = Recommendations on prudent use
5 = AHL
6 = Stimulate new
8 = Strengthen AMR and consumption surveillance
Sales of veterinary antimicrobial agents in 26 EU/EEA countries in 2013

Fifth ESVAC report
Figure 9. Sales for food-producing species, including horses, in mg/PCU, of the various veterinary antimicrobial classes, for 26 countries, in 2013.

* Amphenicols, cephalosporins, other quinolones and other antibacterials (classified as such in the ATCvet system).

1 Differences between countries can partly be explained by differences in animal demographics, in the selection of antimicrobial agents, in dosage regimes and in type of data sources, among other factors.
Figure 21. Spatial distribution of overall sales of all antimicrobials for food-producing animals, in mg/PCU, for 26 countries, for 2013.
Figure 26. Spatial distribution of sales of penicillins for food-producing animals, in mg/PCU, for 26 EU/EEA countries, for 2013
Figure 30. Spatial distribution of sales of 3rd- and 4th-generation cephalosporins, in mg/PCU, in 26 EU/EEA countries, for 2013.

1 Sales < 1 kg in Iceland.
AMR specific proposals of the VMP and MF draft revised regulations
1. Consideration at Authorisation

- AMR Consideration in risk-benefit
- Documentation: (a) Direct/Indirect public and animal health risk and (b) mitigating measures.
- SPC – classification re: strategic use and/or special considerations (eg restricted use)
- Refusal grounds are negative risk-benefit (AMR) or human reserved.
- Additional 5yr data protection for new.
2. Post Authorisation surveillance
   • Renewed risk benefit
   • Sales Data → Use data provision

3. Availability and Professional use
   • Internet Sales
   • Prescriber retail only for own animals and amount for treatment
   • Limit cascade use
4. Medicated Feed

- Carry Over
- Amount supplied and prescription life
- Vet examination & Disease symptoms.
<table>
<thead>
<tr>
<th>Organism</th>
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<tbody>
<tr>
<td>Enterococci</td>
<td></td>
<td>V</td>
</tr>
<tr>
<td><em>E. coli</em></td>
<td></td>
<td>V  → M</td>
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<tr>
<td><em>C. coli</em></td>
<td></td>
<td>M  → V</td>
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<tr>
<td><em>C. jejuni</em></td>
<td></td>
<td>M</td>
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<tr>
<td>Salmonella &amp; <em>E. coli</em></td>
<td></td>
<td>- expanded</td>
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</table>
1. Commensal *E. coli*
   - ESBLs
   - AMP-C
   - Carbapenemases

2. Resistant salmonella
   - ESBLs
The UK has extensive surveillance of AMR in veterinary pathogens
