AMR Surveillance in Animals in the UK

Veterinary Medicines Directorate

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Routine Surveillance

Harmonised Monitoring

WHO
- APHA, AFBI, DAERA, SRUC
- UK-wide

WHAT
- Surveillance of healthy pigs and poultry at slaughter
- Representative and randomised
- AMR in *E. coli*, *Salmonella*, *Campylobacter* and enterococci. Selective media is used to detect ESBL/AmpC and carbapenemase-producing *E. coli*
- Tested against a panel of antibiotics relevant to human health
- Largely aligns with the retail meat sampling programme performed by FSA
- Comparable to other European countries

WHY
- Provides a measure of AMR in livestock populations
- Assess trends in AMR and impact of interventions

Risk alert

Risk management

Risk assessment

Risk Communication

ResAlert

A coordinated UK-wide response since 2015 to the identification of a resistant bacterial isolate, or resistance gene, from animals, their environment, animal feed, or food of animal origin, that is considered potentially high risk to human and/or animal health.

Includes experts from human and animal health, food safety, and the environment, across all four nations of the UK. Co-ordinated by the VMD.

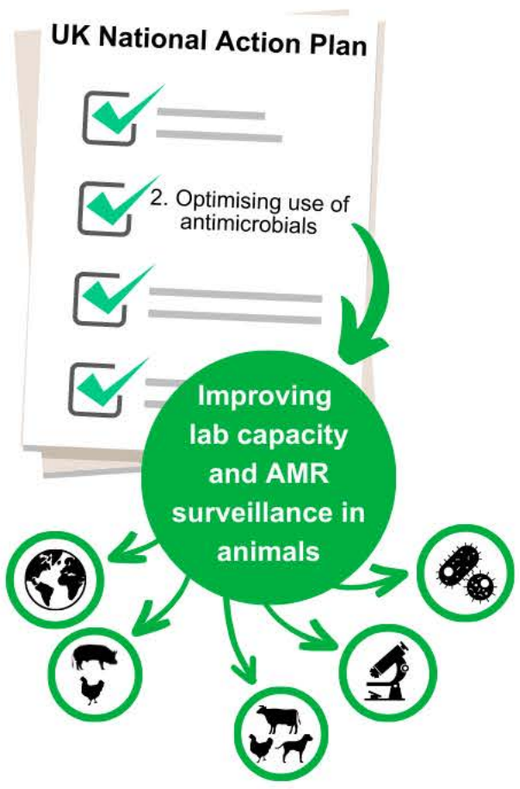
Clinical Surveillance

WHO
- Private veterinary surgeons to APHA
- England and Wales

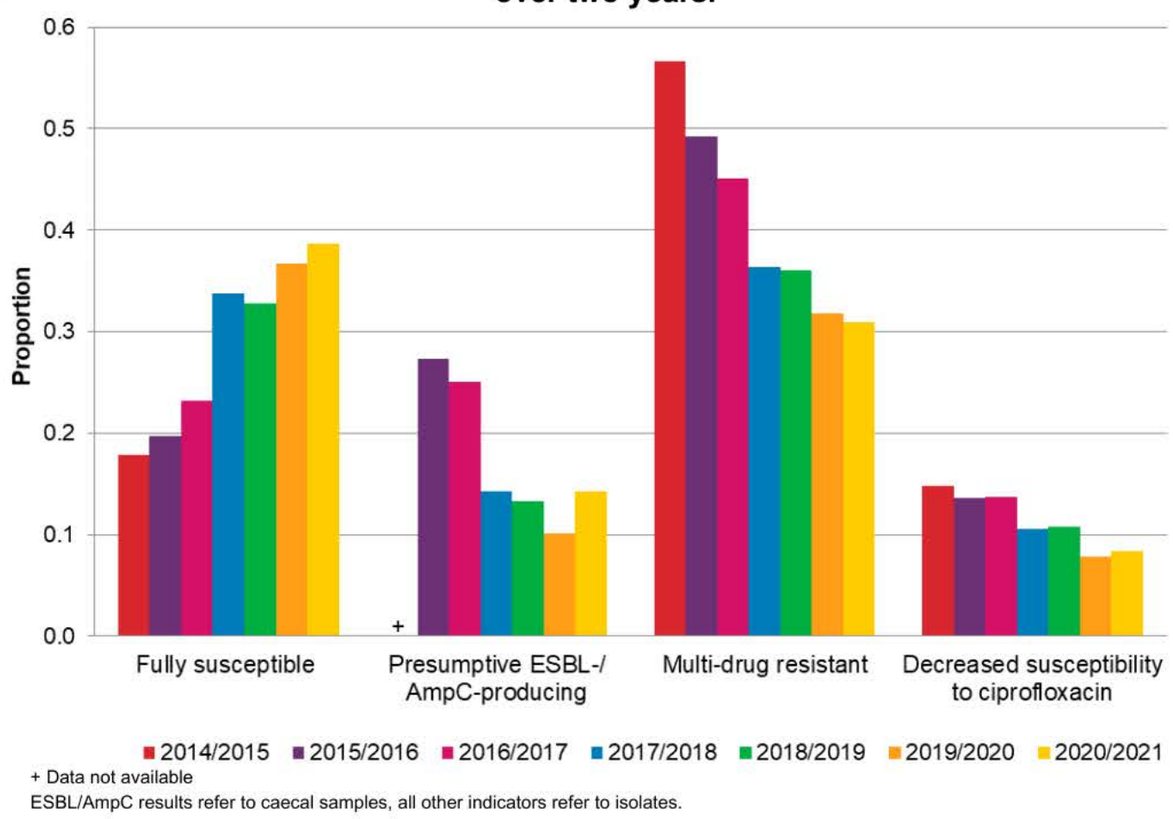
WHAT
- Passive surveillance that evaluates AMR in bacteria of relevance to animal health
- Isolates from post-mortem or diagnostic samples
- Not limited to food producing animals
- Surveillance is not representative of animal populations as a whole
- Antimicrobial susceptibility testing (AST) using disc diffusion against panels of antibiotics relevant to animal health

WHY
- Provides vets with culture and sensitivity results
- Identify emerging AMR

Surveillance enhancement
Bacterial susceptibility of selected veterinary pathogens now determined by MIC testing and tested against a more clinically relevant panel of antibiotics



Proportion of harmonised monitoring *Escherichia coli* indicators from broilers, fattening turkeys and fattening pigs weighted by population size, averaged over two years.



+ Data not available
ESBL/AmpC results refer to caecal samples, all other indicators refer to isolates.

Outputs of our surveillance programmes

New Initiatives

PATH-SAFE

WHO Governmental agencies, external stakeholders and academics

WHAT Develop a model national genomic surveillance network. Building upon existing initiatives and utilising expertise from academia, industry, and government to progress surveillance of foodborne disease and AMR.

WHY To improve the detection and tracking of foodborne pathogens and AMR throughout agri-food systems.

VMD VMD are piloting surveillance in new areas:
- AMR in prime lambs and cull ewes
- AMR in abattoir environment and wastewater
- AMR in prime beef cattle
- AMR in bulk milk from dairy farms (with National Milk Laboratories)
- AMR in imported animal feed ingredients and finished feed (with Agricultural Industries Confederation)

Private Laboratory Initiative (PLI)

WHO VMD, APHA

WHAT Initiative to collect and process AMR data from private veterinary laboratories to provide an additional source of data for AMR clinical surveillance

WHY
- Increase the sensitivity of surveillance and timeliness of detection of potential threats
- Provides a stronger evidence base for AMR in UK livestock

One Health Integrated Surveillance (OHIS)

WHO Cross-governmental group of experts responsible for delivering AMR surveillance in different sectors and nations of the UK

WHAT Develop a UK-wide strategy for the integration of AMR surveillance across animal & human health, food, & the environment

WHY To address the UK's commitment to improving efforts to combat AMR through a One Health approach

Complete	Identify AMR surveillance evidence gaps across the One Health spectrum
Complete	Synthesise draft output identifying possible next steps
Ongoing	Produce detailed write-up of OHIS processes and outputs
Upcoming	Present to policy colleagues for inclusion in next National Action Plan