UK Surveillance Forum (UKSF)

The UK approach to animal health surveillance

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Foreword by Christine Middlemiss, Christianne Glossop, Sheila Voas and Robert Huey

We welcome the launch of the “UK Approach to Animal Health Surveillance”. This document represents a significant opportunity to not only reaffirm our commitment to a world-class animal health surveillance system but also to reinforce the key the components.

A robust animal health surveillance system underpins not only the UK’s credibility with trading partners but also supports the rural economy, underpins food security, protects public health, and is one of the pillars needed to maintain the UK’s recognised status as a world leader in animal health and welfare. Effective surveillance is also linked to areas such as enforcement and gathering actionable intelligence about industry practices and trends, which is used for both devising policy and Ministerial decision making.

Credibility with trading partners has always been important, and early disease identification and control is a key part of that. Looking to the future, there will also be a need for integrated systems to provide assurance to trading partners and increase the productivity of livestock farms by identifying and reducing prevalence of endemic disease.

All four UK administrations recognise the need for strong communication, collaboration and partnership in this area. Diseases do not respect borders and the movement of animals, people and products gives rise to a constant threat of geographical leaps in disease. The continual changes in agri-industry and human practices are not isolated to particular administrations, but are UK-wide issues. Similarly the effects of climate change, the need for a “One Health” approach and the necessity of a consistent approach to detect anti-microbial resistance (AMR) are best managed collaboratively across the UK administrations.

As Chief Veterinary Officers (CVOs) we are committed to this and look forward to continuing to work together and with our industry partners to further develop and improve animal health surveillance in the UK.

1. Introduction and scope

1.1 Purpose

The “UK Approach to Animal Health Surveillance” is a commitment to an effective world-leading risk-based, early warning, passive and active surveillance system that is fit for future challenges to the UK. This document provides trading partners, stakeholders and delivery partners with an outline of government’s, industry’s, and the veterinary
profession’s requirements for the surveillance of threats to animal health and to public health. It enshrines the principles by which animal health surveillance will be delivered in the UK.

It is a live document, with no specified end date. It will be reviewed annually by the UK Surveillance Forum.1

1.2 Surveillance components

“Surveillance” for the purposes of this document is defined as the systematic, continuous or repeated, measurement, collection, collation, analysis, interpretation and timely dissemination of animal health and welfare related data from defined populations. These data are then used to describe health hazard occurrence and to contribute to the planning, implementation, and evaluation of risk mitigation actions. There are many different types of surveillance, including all elements of early warning surveillance (including horizon scanning, international disease monitoring and veterinary scanning surveillance), risk-based targeted (‘active’) surveillance, as well as surveillance specifically for determining country freedom, which is delivered through a combination of surveillance activities.

1.3 The role of surveillance

The early detection of disease threats is one of the core components of Veterinary Public Health and State Veterinary Medicine:

1. Keep it out  
2. Detect it early (surveillance)  
3. Stop it spreading  
4. Eliminate or control

The UK’s approach to surveillance recognises that various sectors benefit from the effective surveillance of animal health and welfare threats. Beneficiaries include:

- the UK commercial livestock sectors  
- equine industry  
- companion and captive animals keepers  
- those with an interest in aquatic animals, wildlife and pollinators  
- UK Administrations with responsibilities for animal health and welfare  
- veterinarians and animal health professionals

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1 The UK Surveillance Forum (UKSF) is the key forum for coordination and oversight of surveillance systems across in each of the Administrations in the UK. It provides a structure and direction to develop a single view of the UK’s animal health status, the evidence to assure this and our approach to the identification of new and emerging threats and provide evidence on its health status. Membership consists of the CVOs, their deputies and surveillance policy leads from England, Scotland, Wales & Northern Ireland
• the food and supply chains that provide produce of animal origin to consumers
• public health organisations and authorities

1.4 Scope

Species
All kept and wild animals (including livestock production, equines, pollinators, aquatic and companion animals, as well as disease threats to and from free-living animals / wildlife (including marine animals).

Geography
This Approach covers animal health surveillance in all constituent parts of the United Kingdom – being England, Wales, Scotland and Northern Ireland. It also includes the requirement to detect threats to UK from overseas (i.e. through horizon scanning and international disease monitoring). The Approach does not cover the Crown Dependencies or Overseas Territories, although UK governments will work with these administrations to address common surveillance matters, particularly where they fall in the same OIE zone for country freedom from key exotic diseases.

Surveillance activities
This Approach focusses on the requirements for, and delivery of, all aspects of surveillance in the UK, including those listed in 1.2 above.

It is recognised that for new and emerging diseases, threat detection usually necessitates an element of threat characterisation (in order to provide a case definition for surveillance activities). Therefore, the initial threat characterisation is within the scope of this document.

Effective surveillance requires effective communications between all who hold data, information and knowledge relevant to the detection of animal health threats. Therefore, communications are within the scope of this document.

Other aspects of risk management, including risk mitigation, are not within the scope.

2. Objectives and success criteria for surveillance

2.1 Surveillance system objectives
Each and every surveillance activity must have a discrete set of objectives – whether this is a declaration of freedom from a specific disease, determination of a level of disease in a
population, or the detection of a new or emerging threat. Overall however, the objectives of
the surveillance system reflect the common objective that the UK needs to protect animal
and public health, support the rural economy, safeguard food security, and maintain
national credibility with trading partners. Delivery of these objectives is not a static exercise
that will ever be ‘completed’. They must be continually strived for. While each
Administration will have national priorities, the common objectives are:

1. to produce knowledge that enable actions to be taken which safeguard and
   improve animal health and welfare
2. rapid detection of notifiable diseases
3. protection of public health
4. detection of new, emerging and re-emerging diseases
5. monitoring of trends of, and levels of risk from, endemic diseases
6. detection of other significant or emerging threats to animal health
7. compliance with international obligations and requirements
8. provide an overview of health statuses of animal populations in the UK
9. detection of failures of the effectiveness and safety of veterinary medicines,
   including aspects of surveillance of antimicrobial and anthelminthic resistance
10. contribute to the resilience, sustainability and quality of veterinary services in the
    UK
11. other benefits, such as consumer confidence, environmental protection, improved
    biosecurity, better international trade terms, and enhanced reputation of UK
    livestock farming and animal-keeping

2.2 Success criteria for the surveillance system

A robust, successful surveillance system should have the following outcomes:

1. a comprehensive network of informed surveillance partners, who have capability
   and capacity to deliver their component of the surveillance system
2. relationships based on trust, respect and understanding of mutual benefits and
   responsibilities
3. partnership-working that gets from discussion to action quickly
4. clear, effective communications that facilitate engagement and result in actions
5. surveillance coverage that is proportionate to:
i. the value of the surveillance outputs
ii. the size (likelihood and impact) of potential risks
iii. customer requirements

6. full understanding of the benefits and limitations all potential information sources, and the ability to access them quickly and easily

7. maintenance and development of the skills and understanding required to identify and animal health and welfare risks - these skills are required by, but vary between:
   i. animal keepers
   ii. vets
   iii. scientists
   iv. wildlife, aquatic and other animal experts
   v. laboratories and veterinary diagnostic facilities
   vi. information analysts and specialists

8. the surveillance system must have sufficient activity and capacity to maintain the capability and expertise required to detect the new or abnormal, and to enable a baseline of normal health status to be understood

9. the UK must have sufficient veterinary, pathology and scientific capability and capacity to deliver the goals of surveillance - this may be provided by the private sector, by government or by both

10. the surveillance system must be appropriately resourced to meet its goals, and the resources must be apportioned according to customers’ priorities and the significance of the threats that are being detected, in so far as they can be determined or estimated

11. components of the surveillance system must operate to appropriate quality standards

12. an affordable and practical surveillance system will always result in the possibility of non-detection of threats - the degrees of confidence of the system and its findings must be fully understood and clearly communicated at all stages

3. Ways of working

Successful delivery of surveillance is a partnership between animal owners, veterinary clinicians, diagnostic facilities, information analysers, and other specialists. Government has a role in co-ordinating, and ensuring that surveillance meets national needs. This section outlines how these groups should work together to deliver and to utilise surveillance of animal health and welfare threats.
3.1 Prioritisation

Surveillance is a necessary component of protecting public and animal health, animal welfare, food production and trade. However it is not the only component, and therefore funding and resource allocation will always be a matter of prioritisation.

There needs to be a continuous cycle of assessing and ranking surveillance activities in accordance with shifting priorities for allocation of resources.

Criteria for setting priorities and may include\(^2\):

- Legislative requirements
- Political priorities
- Trade considerations (for current and potential trading partners)
- Real or perceived concerns about:
  - emerging threats
  - endemic diseases with public health implications
  - hazards causing significant welfare issues
  - hazards causing production loss and economic impacts

Each of the Administrations in the UK will set their own priorities. However, transparency and coordination (where priorities overlap) across the Administrations will help to ensure efficient allocation of resources.

Stakeholders, including the general public health sector, vet profession, companion animal owners, wildlife managers as well as those involved in farming and other parts of the food chain, will have their own priorities. While government priorities may range across the above, they will be focussed on public and societal needs. However, it can be expected that industry will be more focussed than government on production and industry sustainability. Communication of priorities, as well as sharing of data, is critical – to ensure that shared objectives are met and duplication is minimised.

3.2 Communication and engagement

Communication and engagement are key to ensuring effective surveillance. Engagement requires excellent communication channels between stakeholders, including:

- animal keepers
- vets
- diagnosticians
- academia and scientists
- policy-makers
- wildlife managers
- others, for example the pharmaceutical industry

\(^2\) RISKSUR 2015: Best practices for risk-based and cost effective animal health surveillance in the European Union
Communication must also be:

- across government bodies (including public health and food safety teams), including in different UK administrations
- between government and industry (including trading partners)
- between UK Administrations and relevant international bodies/organisations including the World Animal Health Organisation

All involved must have sufficient awareness, training, knowledge and expertise to fulfil their role as participants in the surveillance system. The requirements of surveillance should be embedded in training and the engagement of livestock farmers, vets in practice, diagnosticians, and analysts, to appropriate, defined standards.

There must be sufficient capability for the surveillance system to characterise new and emerging threats, to the level that enables their efficient and effective detection.

The surveillance system must exploit all sources of information that can contribute to the development of the surveillance system. There must be constant effort to review the options and opportunities available.

The surveillance system must deliver both syndromic data, based on broad categories of clinical and epidemiological presentation in animals, and also information on the causes of the diseases that have been identified.

The surveillance system must have effective oversight and governance that reflects the beneficiaries and the contributors to the system, and those who pay for it.

### 3.3 Capturing data

The UK surveillance system must exploit all sources of information that can contribute to its aims. There must be constant effort to review the options and opportunities available.

Implicit to creating a ‘picture’ of animal health in the UK is the sharing of data between government and industry.

Government will collect data on diseases and high level trends and is committed to sharing this with relevant stakeholders to facilitate risk-based trading, and to inform disease prevention and mitigation measures.

Industry collect some data which, while essential to it in terms of productivity, is also useful in closing gaps in surveillance, providing a baseline and identifying the need for targeted surveillance. This may include data such as abortion rates, milk yield, birth rates and mortality rates. Where this does not compromise data protection laws, this information should be used for the public good and does not become the sole property of the individuals or organisations collecting it.

There should be systems in place to link animal health and animal movement data. Scotland and Northern Ireland already have these systems, and England and Wales are
working to deliver such a system. Every effort must be made to ensure that these systems are interoperable.

The surveillance system must deliver both syndromic data, based on broad categories of clinical and epidemiological presentation, and also information on the causes of the diseases that have been identified.

4. Evaluation and performance monitoring

Surveillance systems must be regularly monitored and evaluated to “to inform on the capacity of the surveillance system to generate its outputs and address its objectives, and to allow for timely implementation of corrective actions”3. Monitoring and evaluation is also critical to setting priorities.

Each administration will set its own evaluation and performance monitoring frameworks for their respective surveillance systems.

The UK Approach should be subject to periodic review and must be assessed against the performance objectives and success criteria outlined above. Regular reviews will be undertaken by the UK Surveillance Forum, which will use the outcomes of its evaluations to inform future priorities, system development and potential changes to the Approach.

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3 RISKSUR 2015: Best practices for risk-based and cost effective animal health surveillance in the European Union