

BVA POSITION ON VETERINARY SCANNING SURVEILLANCE



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A vibrant green field of grass under a bright, cloudy sky with a sun flare. The sun is positioned in the upper right, creating a strong lens flare effect across the scene. The clouds are white and fluffy, and the grass in the foreground is lush and green.

BVA is the national representative body for the veterinary profession in the United Kingdom (UK) and has over 16,000 members. Our primary aim is to represent, support and champion the interests of the veterinary profession in this country, and we therefore take a keen interest in all issues affecting the profession, including animal health and welfare, public health, regulatory issues and employment matters.

www.bva.co.uk

Executive summary

BVA attributes equal importance to veterinary scanning surveillance and animal health and disease monitoring across production animals (including fish), equine, wildlife and companion animals. All forms of veterinary scanning surveillance (including diseases, infections, health syndromes¹ and antimicrobial resistance) act as a sentinel for wider human and animal health and are underpinned by a common 'One Health' rationale to minimise harm.² To this end, the continuous monitoring of new and emerging disease through data collection, analysis and sharing across species provides high-quality intelligence on animal health and welfare that enables policy makers, veterinary professionals and animal keepers to take decisions to improve animal health and welfare, productivity, and identify and manage threats to public health, trade, food quality, the environment and leisure and tourism.³

The value of animal health and disease monitoring and the role of the veterinary profession

The role of veterinary surgeons in protecting animal health, welfare and public health underpins all trade, as well as providing assurances for domestic consumers. Official statistics put the value of UK livestock outputs at £12.7 billion⁴ and the value of UK aquaculture outputs at £0.59 billion.⁵ The input of a thriving, sustainable veterinary workforce and a robust surveillance system is integral to the realisation of these high-value outputs.

Veterinary surgeons working within the production animal sector work closely with farmers and animal keepers to ensure biosecurity measures are formulated, implemented and health and disease threats are monitored and acted upon. Both private veterinary surgeons and Government employed veterinary surgeons, are uniquely positioned to make every on-farm contact count by providing a holistic approach to overall herd health and welfare, its wider determinants and, in turn, disease surveillance and prevention.

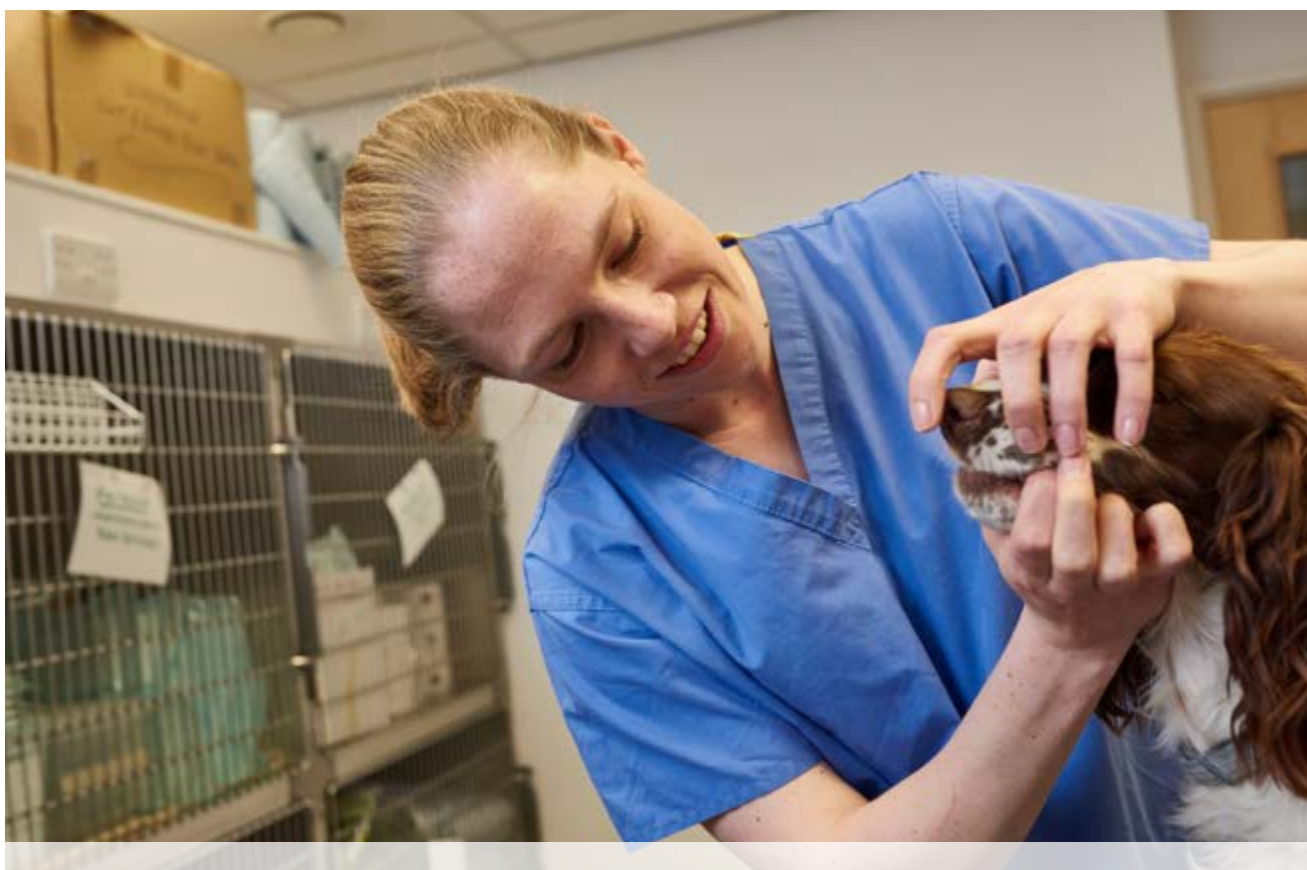
1 EPIC, 2017. 'Year 2030: What is the future of animal surveillance in Scotland?' [pdf] Available at: www.epicotland.org/media/1434/epic_scenario_planning_reportcompressed.pdf [Accessed: 2 January 2018].

2 OIE, 2017. 'The OIE recommends strengthening animal disease surveillance worldwide' [online] Available at: www.oie.int/for-the-media/press-releases/detail/article/the-oie-recommends-strengthening-animal-disease-surveillance-worldwide/ [Accessed: 8 January 2018].

3 Animal Health and Veterinary Laboratories Agency (AHVLA), 2013. Surveillance 2014. Changes to the delivery of Veterinary Scanning Surveillance in England and Wales. Available at: <http://webarchive.nationalarchives.gov.uk/20140707142907/http://www.defra.gov.uk/ahvla-en/disease-control/surveillance/new-vet-surv-model/> [Accessed: 2 January 2018].

4 Defra, DAERA, Welsh Government, Scottish Government, Agriculture in the United Kingdom 2016, 2017.

5 Centre for Environment, Fisheries and Aquaculture Science, 2012. Aquaculture statistics for the UK, with a focus on England and Wales. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/405469/Aquaculture_Statistics_UK_2012.pdf



The role of the veterinary profession: 'eyes and ears' of animal health and welfare across a myriad of settings

The profession's vigilance, innovation and commitment to the role of the veterinary surgeon as a public guardian across species areas ensures the continual monitoring for endemic disease and oversight of new and emerging threats. Every day veterinary surgeons across different areas of practice and research routinely participate in different surveillance related activities to contribute to the surveillance network and safeguard the UK's animals, humans and trade opportunities.

Enhancing the UK surveillance systems

Whilst BVA recognises the recent financial constraints and remodelling that the UK Government surveillance networks have been faced with, fundamentally BVA would oppose any further reduction in the current level of Government resource spent on the scanning surveillance network in

England and Wales, Scotland and Northern Ireland. Instead, there are real opportunities for the veterinary profession to work with the UK Governments and other key stakeholders to modernise and optimise the existing surveillance network. This can be achieved through:

- Maintaining the current level of Government resource spent on the scanning surveillance network
- Adopting new approaches to data collection and feedback
- Optimising appropriate skills and expertise
- Rethinking traditional approaches to funding and coordination
- Articulating the value of surveillance reporting to the veterinary profession and other stakeholders through education to increase awareness and participation
- Working collaboratively with stakeholders to explore innovative communication strategies

[See pages 4–5 for our specific recommendations](#)

Recommendations

Maintaining the current level of Government resource for scanning surveillance network

Recommendation 1: As the UK looks to leave the EU, the UK Governments should maintain existing animal health legislation, maintain the current level of resources for veterinary surveillance and provide adequately resourced systems for detecting new and emerging disease to ensure there is no reduction of existing animal health standards and protections and to enable trade in animals and animal products.

Recommendation 2: In Northern Ireland, DAERA and the Department of Agriculture Food and the Marine should ensure that the present high level of cooperation continues across the border to raise animal health and welfare standards with an all-island approach when the UK leaves the EU.

Recommendation 3: As the UK looks to leave the EU and considers new approaches to data, reciprocal data sharing within the whole of Europe and elsewhere internationally should be maintained.

Recommendation 4: The UK Governments should look to better harness and coordinate the differing strands of veterinary surveillance activity through a UK-wide strategy that aims to ensure coverage is sufficient and representative of all contributors and addresses production animal, equine, companion animal and wildlife health and disease monitoring.

Recommendation 5: The UK Governments should establish a body to oversee and coordinate surveillance policy across the four administrations of the UK.

Recommendation 6: Government resources for the existing Veterinary Investigation Centres in the UK should be maintained, with no further reduction of key structures and reporting routes in the scanning surveillance network across England, Wales, Scotland and Northern Ireland without the provision of viable alternatives to maintain coverage.

Recommendation 7: There should be greater cooperation and collaboration between APHA, AFBI and SACCVS in the provision of diagnostic tests and tests required for trade to ensure a robust and reliable cost-effective service for veterinary surgeons and their clients to encourage contributions to the surveillance system while ensuring best value for the taxpayer.

Adopting new approaches to data collection and feedback

Recommendation 8: BVA calls on the UK Governments to increase the coverage of the scanning surveillance network through the use of syndromic surveillance and the repurposing of existing health data or data on clinical disease events eg. health records from private practice, private laboratories, abattoir reports, market monitoring, farm assurance schemes or fallen stock reports.

Recommendation 9: Submission and sharing of data should be incentivised by enabling veterinary professionals, veterinary practices, animal keepers and laboratories to derive professional, economic, logistic and public relations value from inputting data, on top of the value derived for animal health and welfare.

Recommendation 10: A respected, independent body should be identified as the trusted 'honest-broker' of data and information.

Optimising relevant skills and expertise

Recommendation 11: There should be no further reductions in the number of Veterinary Investigation Officers in England and Wales. Rather, across the UK the role and status of Veterinary Investigation Officers should be reinforced and engagement with local veterinary practices and communities increased in order to incentivise the role of Veterinary Investigation Officer or regional equivalent as a career option.

Recommendation 12: There should be a diversified career pathway for Veterinary Investigation Officers, as well as regional and partner provider equivalent roles, with improved remuneration brought in line with rises in inflation and veterinary roles demanding equivalent skills and experience across the UK.

Recommendation 13: The UK Governments should explore opportunities for improved data sharing and capture from multiple sources, effectively harnessing relevant expertise in data analysis, assimilation and feedback to deliver meaningful analyses and outputs to stakeholders. As part of this, opportunities to strengthen the existing APHA

Surveillance Epidemiology and Data Analysis (SEDA) team within the Surveillance Intelligence Unit (SIU) should also be explored and resourced.

Recommendation 14: The UK Governments should make greater use of communications experts to optimise existing communications channels, better utilise digital platforms and ensure effective and timely communications about reporting routes, what data to report, diagnostic support and alerts when action or heightened awareness is needed.

Rethinking traditional approaches to funding and coordination

Recommendation 15: Consideration should be given to taking a blended funding approach to surveillance, research and delivery with the UK Governments working in partnerships to co-fund projects with research institutions (eg. Research Councils UK), industry organisations or charities.

Recommendation 16: As the Animal Health Surveillance Governance Board for England and Wales reaches the end of its three-year term, its effectiveness should be robustly reviewed to ensure an appropriate governance structure is maintained.

Recommendation 17: Existing Government and Government-partner initiative scanning surveillance infrastructure and surveillance reporting routes across the UK nations should be expanded to provide defined reporting routes for small animal surveillance and more coordinated ways to report wildlife and equine disease surveillance to ensure joined-up working across species groups and organisations carrying out surveillance activities.

Recommendation 18: As the UK Governments consider legislation surrounding wildlife rehabilitation centres, regard should be given to disease investigation, surveillance procedures and reporting routes for disease incidents recognised at wildlife rehabilitation centres.

Articulating the value of surveillance through education

Recommendation 19: RCVS Day One Competences should be further developed to include specific reference to practical skills in surveillance activities (contributing to and using surveillance reports), which are consolidated by veterinary graduates throughout their Professional Development Phase.

Recommendation 20: Vet schools should review their curricula to ensure they reflect the clinical, business and professional value of surveillance and adopt approaches to incentivise participation in surveillance activities across species areas.

Working collaboratively with stakeholders to explore innovative communication strategies

Recommendation 21: The UK Governments should consider the development of a centralised web platform that clearly outlines the details of how to contribute to surveillance activities across species areas, including small animal, equine and wildlife disease surveillance, as well as where to access supporting resources.

Recommendation 22: The UK Governments should further adapt their surveillance outputs and communications in order to optimise engagement through online and hand-held media, for example via Twitter, Facebook groups, apps, finger tips data and extending the recently launched APHA Disease Surveillance Dashboards across the UK.

Recommendation 23: In order to increase engagement with surveillance activities, consideration should be given to applying behavioural insight frameworks to adapt current communications outputs and language in order to positively influence behaviours and incentivise engagement.

Recommendation 24: The value of the service provided by Veterinary Investigation Centres, APHA partner post-mortem providers, SAC Disease Investigation Centres and AFBI laboratories should be better defined and communicated to both private veterinary surgeons and farmers to increase participation in surveillance activities and dialogue with local Veterinary Investigation Officers to improve overall animal health management.

Recommendation 25: BVA has a role to play in raising awareness of surveillance activities and contributions, the reporting routes available and the value of disease surveillance and health and disease monitoring amongst the veterinary profession. We would welcome opportunities to work in partnership with key stakeholders to explore innovative communication strategies with the aim of increasing participation and awareness of reporting routes across different species areas.



Introduction

BVA attributes equal importance to veterinary scanning surveillance and animal health and disease monitoring across production (including fish), equine, wildlife and companion animals. All forms of veterinary scanning surveillance (including diseases, infections, health syndromes and antimicrobial resistance⁶) act as a sentinel for wider human and animal health and are underpinned by a common 'One Health' rationale to minimise harm.⁷ To this end, the continuous monitoring of new and emerging disease through data collection, analysis and sharing across species provides high-quality intelligence on animal health and welfare that enables policy makers, veterinary professionals and animal keepers to take decisions to improve animal health and welfare, productivity, and identify and manage threats to public health, trade, food quality, the environment and leisure and tourism.⁸

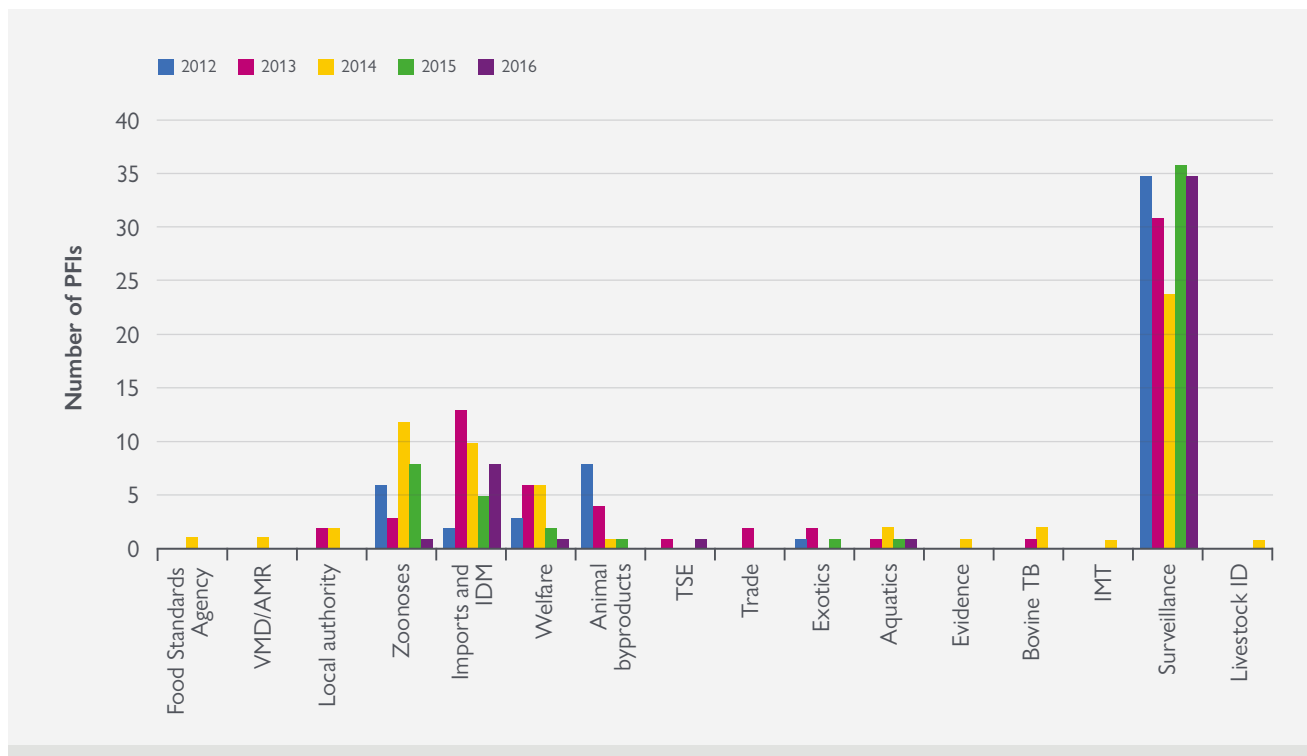
The value of animal health and disease monitoring and the role of the veterinary profession

The role of veterinary surgeons in protecting animal health, welfare and public health underpins all trade, as well as providing assurances for domestic consumers. Official statistics put the value of UK livestock outputs at £12.7 billion⁹ and the value of UK aquaculture outputs at £0.59 billion.¹⁰ The input of a thriving, sustainable veterinary workforce and a robust surveillance system is integral to the realisation of these high value outputs.

Veterinary surgeons working within the production animal sector work closely with farmers and animal keepers to ensure biosecurity measures are formulated, implemented and health and disease threats are monitored and acted upon. Both private veterinary surgeons and Government employed veterinary surgeons, are uniquely positioned to make every on-farm contact count by providing a holistic approach to overall herd health and welfare, its wider determinants and, in turn, disease surveillance and prevention.

Figure 1¹¹ (page 8) demonstrates the sources of Points for Information (PFIs) (animal health matters of interest that do not require additional action) that the UK's Veterinary Risk Group received across 2012–2016. Scanning

- 6 EPIC, 2017. 'Year 2030: What is the future of animal surveillance in Scotland?' [pdf] Available at: www.epicscotland.org/media/1434/epic_scenario_planning_reportcompressed.pdf [Accessed: 2 January 2018].
- 7 OIE, 2017. 'The OIE recommends strengthening animal disease surveillance worldwide' [online] Available at: www.oie.int/for-the-media/press-releases/detail/article/the-oie-recommends-strengthening-animal-disease-surveillance-worldwide/ [Accessed: 8 January 2018].
- 8 Animal Health and Veterinary Laboratories Agency (AHVLA), 2013. Surveillance 2014. Changes to the delivery of Veterinary Scanning Surveillance in England and Wales. Available at: <http://webarchive.nationalarchives.gov.uk/20140707142907/http://www.defra.gov.uk/ahvla-en/disease-control/surveillance/new-vet-surv-model/> [Accessed: 2 January 2018].
- 9 Defra, DAERA, Welsh Government, Scottish Government, Agriculture in the United Kingdom 2016, 2017.
- 10 Centre for Environment, Fisheries and Aquaculture Science, 2012. Aquaculture statistics for the UK, with a focus on England and Wales. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/405469/Aquaculture_Statistics_UK_2012.pdf
- 11 2017. Review of animal health threats by the UK's Veterinary Risk Group *Veterinary Record* **181**, 139-140.

Figure 1: Sources of points for information (PFIs) 2012 to 2016¹¹

surveillance comprises the overwhelming majority of PFI sources, illustrating the extremely significant – and consistent – contribution of scanning surveillance over time to the identification of disease threats in the UK¹².

If not acted upon, disease threats can have a devastating impact on animal health and welfare, and serious economic and social consequences. The Foot and Mouth disease epidemic in 2001, for example, is estimated to have cost £5 billion to the private sector and £3 billion to the public sector, damaged the lives of farmers and rural communities and caused a general election to be postponed.¹³

‘Brexit’

Although control programmes for new and emerging disease are not mandated by EU legislation, as the UK looks to leave the EU it will be important to ensure that capacity and capability of the surveillance system, which has been under financial pressure in recent years, is maintained at

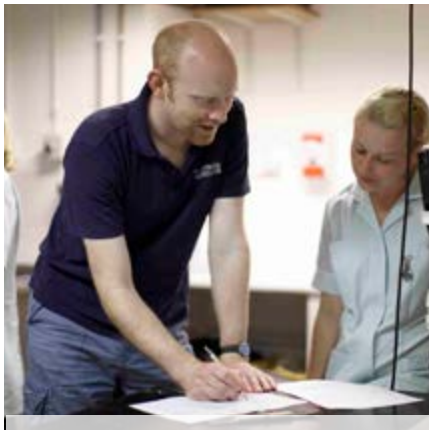
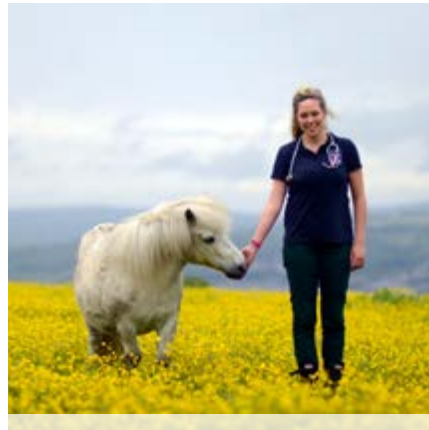
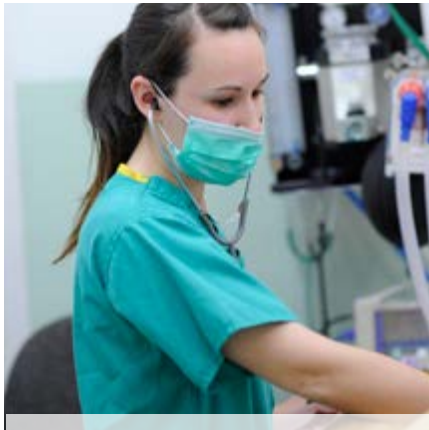
an appropriate level irrespective of legislative requirements post-Brexit. Further, when the UK leaves the EU, Northern Ireland will be the only part of the UK to share a land border with the EU. Currently, there is an all-island approach taken to the control of animal disease and disease surveillance through government and non-government initiatives. With this in mind, DAERA and the Department of Agriculture Food and the Marine should ensure cooperation across the border to continually improve animal health and welfare with an all-island approach.

See the [BVA Brexit and the Veterinary Profession¹⁴](#) report for more details on our recommendations for maintaining animal health standards and ensuring appropriate legislative requirements as the UK exits the EU.

¹² Other diagnostic data is available to the veterinary profession that is captured and communicated by private initiatives. To optimise the coverage of the UK’s veterinary surveillance networks joint working and data sharing is required between the UK Governments and these initiatives. See Recommendations 8, 9, 10 and 13.

¹³ National Audit Office, The 2001 Outbreak of Foot and Mouth Disease, 2002.

¹⁴ www.bva.co.uk/uploadedFiles/Content/News,_campaigns_and_policies/Policies/Future_of_the_profession/brexit-and-veterinary-profession-v.1.0.pdf



‘Eyes and ears’ of animal health and welfare across a myriad of settings

The profession’s vigilance, innovation and commitment to the role of the veterinary surgeon as a public guardian across species areas ensures the continual monitoring for endemic disease and oversight of new and emerging threats. Every day veterinary surgeons across different areas of practice and research routinely participate in different surveillance related activities to contribute to the surveillance network and safeguard the UK’s animals, humans and trade opportunities. The breadth of beneficiaries of veterinary surveillance activities is vast, spanning the Food Standards Agency to Public Health England and their respective regional equivalents. Veterinary surveillance activities include, but are not limited to:

- The coordinated identification, risk assessment and management of new and emerging diseases through the Veterinary Risk Group (VRG)¹⁵, which reports to the four Chief Veterinary Officers in the UK.
- Working as a Government veterinary surgeon on the frontline providing a holistic service to private veterinary surgeons and practices, including the provision of advice, establishing relationships within the local veterinary community, receiving diagnostic samples, carrying out diagnostic tests to report on, and escalating any arising concerns across a range of species areas, including production animal and wildlife, through the appropriate channels to ensure action is taken.
- Carrying out animal health, welfare and disease monitoring of production animals on farms, holding centres and in markets in conjunction with local authority inspections and feeding any concerns back to the farm of origin, and to their veterinary surgeons, as well as into Government reporting routes.
- Conducting statutory disease investigations for conditions such as bovine TB and exotic notifiable diseases.
- Collecting and submitting data from production animal carcasses for post-mortem and samples derived from them (including fish, pigs, poultry and horses).
- Collecting and submitting data from samples of animal derived material (including fish, pigs, poultry and horses).
- Inspection practices in abattoirs whereby Official Veterinarians report on diseases and conditions in production animals before and after slaughter that could affect animal and human health. This information is fed into the national surveillance system and, if fed-back in a meaningful way, can help to improve animal health management on-farm.
- Collecting and submitting data from samples of animal derived material on antimicrobial resistance in bacteria found in these samples, data which is then collated by the Veterinary Medicines Directorate from government laboratories.
- Reporting new, unusual or severe incidents of wildlife disease to the [APHA Diseases of Wildlife Scheme](#)¹⁶ through contacting the Wildlife Expert Group veterinary lead or local Veterinary Investigation Centres.
- Participating in veterinary surveillance networks for companion animals such as [SAVSNET](#)¹⁷ or [Vet Compass](#)¹⁸ and inputting health and disease data from veterinary practice records to contribute to a wider picture of health and disease monitoring amongst the nation’s pets.
- Collecting data from small and exotic animal post-mortems and sampling of material in order to identify new and emerging exotic diseases. It must be recognised that validated/accredited tests may not be available for all pathogens in all species, and veterinary clinical and scientific judgements must be employed in the selection of appropriate tests and interpretation of results.
- Collecting and submitting data for specific equine named disease surveillance schemes.
- Sharing data obtained from Defra/AHT/BEVA equine quarterly disease reports.
- Undertaking studies as part of academic and research institutions and reporting pertinent findings.
- Taking action at a grass roots level as an individual practitioner or practice to investigate and escalate an unusual disease incident or anomaly.^{19, 20}
- Reading veterinary surveillance reports to inform local practice and animal health management, CPD and information dissemination at a local level.

15 Kosmider, R., Gibbens, J., Avigad, R., 2017. Identification, assessment and management of new and re-emerging animal-related risks: UK perspective *Veterinary Record* **181**, 67. Available at: <http://veterinaryrecord.bmj.com/content/early/2017/05/16/vr.104258>

16 <http://ahvla.defra.gov.uk/vet-gateway/surveillance/seg/wildlife.htm>

17 www.liverpool.ac.uk/savsnet

18 www.rvc.ac.uk/vetcompass

19 This approach is well established in the livestock sector and notable examples include the detection of BSE in cattle, identification of bovine neonatal pancytopenia in calves that was caused by the use of a novel BVD vaccine and detection of treatment failure due to resistance of bacteria to antimicrobials and parasites to anti-parasiticides.

20 See [Case study 3 \(page 21\)](#).

Enhancing the UK surveillance systems

Whilst BVA recognises the recent financial constraints and remodelling that the UK Government surveillance networks have faced, BVA would oppose any further reduction in the current level of Government resource spent on the scanning surveillance network in England and Wales, Scotland and Northern Ireland. Instead, there are real opportunities for the veterinary profession to work with the UK Governments and other key stakeholders to modernise and optimise the existing surveillance network. This could be achieved through:

- Maintaining the current level of Government resource spent on the scanning surveillance network
- Adopting new approaches to data collection and feedback
- Optimising appropriate skills and expertise
- Rethinking traditional approaches to funding and coordination
- Articulating the value of surveillance reporting to the veterinary profession and other stakeholders through education to increase awareness and participation
- Working collaboratively with stakeholders to explore innovative communication strategies

The success of a surveillance system relies on people and relationships within it, as well as a sound knowledge of where, what, how and who to report to. Whilst the four administrations of the UK have a well-established network of scanning surveillance, at present there is a gap in coordination where key animal health and disease information collected by veterinary surgeons, as outlined above, could be better integrated and utilised within the UK surveillance network. With this in mind, the UK Governments should look to better harness and coordinate these differing strands of surveillance through a UK-wide surveillance strategy that addresses production animal, equine, companion animal and wildlife health and disease monitoring.

Recommendation 1: As the UK looks to leave the EU, the UK Governments should maintain existing animal health legislation, maintain the current level of resources for veterinary surveillance and provide adequately resourced systems for detecting new and emerging disease to ensure there is no reduction of existing animal health standards and protections and to enable trade in animals and animal products.

Recommendation 2: In Northern Ireland, DAERA and the Department of Agriculture Food and the Marine should ensure that the present high level of cooperation continues across the border to raise animal health and welfare standards with an all-island approach when the UK leaves the EU.

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Recommendation 4: The UK Governments should look to better harness and coordinate the differing strands of veterinary surveillance activity through a UK-wide strategy that aims to ensure coverage is sufficient and representative of all contributors and addresses production animal, equine, companion animal and wildlife health and disease monitoring.

Recommendation 5: The UK Governments should establish a body to oversee and coordinate surveillance policy across the four administrations of the UK.

Maintaining the current level of Government resource spent on the UK scanning surveillance network

BVA remains concerned that a reduction in the numbers of Veterinary Investigation Centres in England and Wales since Surveillance 2014²¹ has negatively impacted the robustness of the scanning surveillance network. In BVA's Voice of the Veterinary Profession survey, which was put to a panel of 604 veterinary surgeons in Autumn 2016, results indicated that where there had been changes to post-mortem facilities since 2014, a third of veterinary surgeons affected thought their access to facilities had deteriorated²². In addition, 70% of veterinary surgeons surveyed in BVA's 'Surveillance: use, understanding and engagement' survey²³ felt their contact with Veterinary Investigation Officers had changed for the worse since 2014.

BVA considers that Veterinary Investigation Centres (VICs), APHA contracted providers of post-mortems, SAC Disease Investigation Centres and AFBI laboratories are unique in their provision of a holistic service for veterinary surgeons and farmers, both at a local and national level. Veterinary Investigation Centres and APHA partner providers, their Veterinary Investigation Officers (VIOs) and regional equivalents across the UK are uniquely placed to use investigation findings to identify and assess risk (of disease, poor welfare, loss of productivity) at a local and national

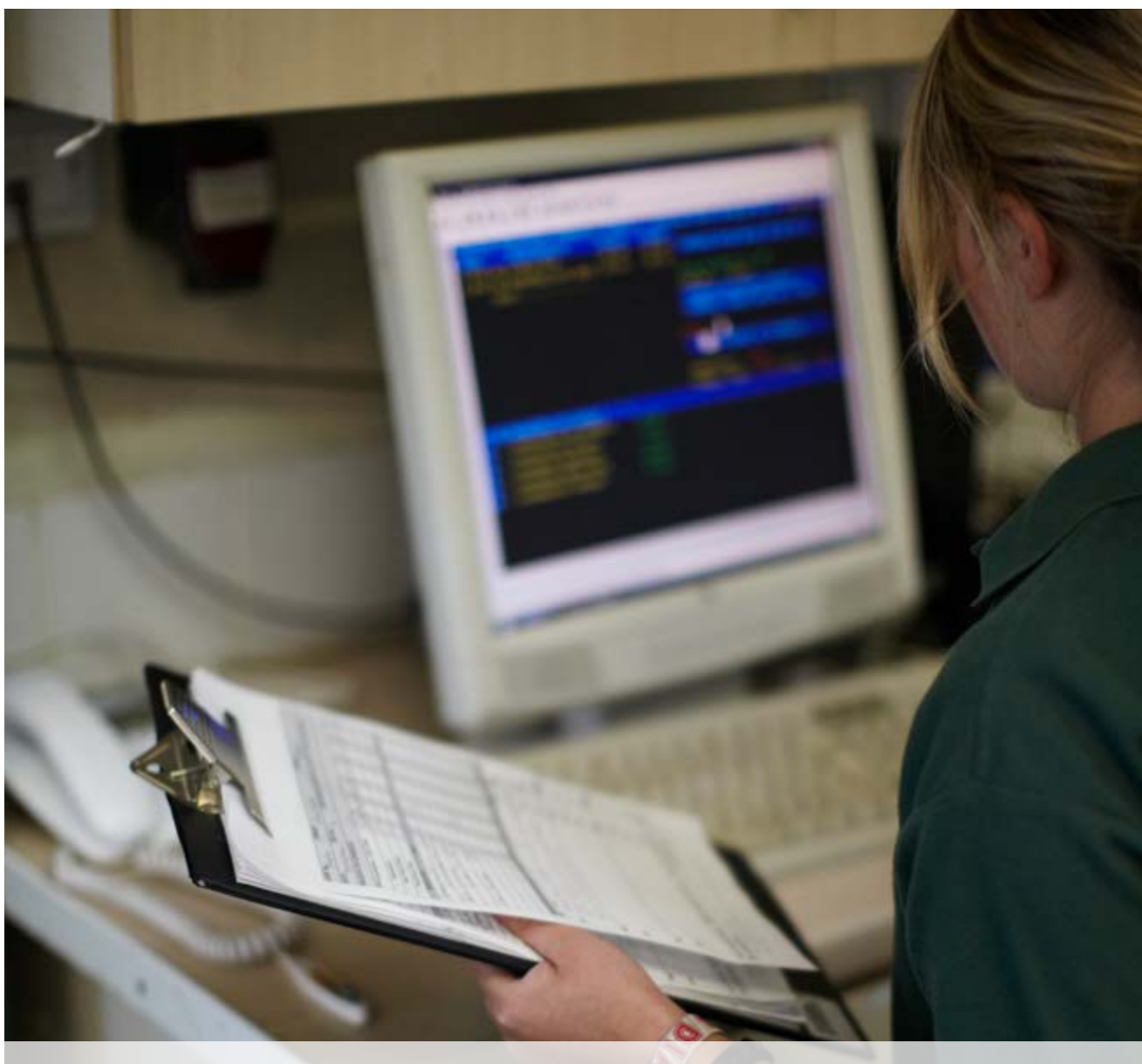
level and offer solutions to mitigate risk (either to the individual, the herd, the sector or the country).

With this in mind, BVA calls for the maintenance of resources for current Veterinary Investigation Centres in the UK and cautions against any further reduction to the scanning surveillance network in England, Wales, Scotland and Northern Ireland without the provision of viable alternatives to maintain coverage.

21 In December 2014 the Animal and Plant Health Agency (APHA) [announced a new structure for disease scanning surveillance in England and Wales](http://veterinaryrecord.bmj.com/content/173/23/565) (<http://veterinaryrecord.bmj.com/content/173/23/565>). The plans resulted in six of the 14 veterinary surveillance centres being closed around England and Wales. The APHA diagnostic network now comprises six Veterinary Investigation Centres. The network also includes APHA's specialist avian centre at Lasswade in Scotland, a laboratory testing facility at Newcastle and a central research and diagnostic facility at Weybridge in Surrey. APHA's network of post mortem services also includes contracted providers for these services: Royal Veterinary College, University of Surrey, the Wales Veterinary Science Centre, University of Bristol, and Scotland's SRUC, SAC Consulting Veterinary Service at St Boswells.

22 [BVA Voice of the Veterinary Profession Survey Panel \(www.bva.co.uk/voice\)](http://www.bva.co.uk/voice) (Autumn 2014) 604 vets working in clinical practice in England and Wales were asked to say how their access to post mortem facilities had changed since the rollout of the Surveillance 2014 programme.

23 In BVA's 'Surveillance: use, understanding and engagement' survey, of the 121 vets surveyed, 70% of vets working in large animal or mixed practice said that their contact with Veterinary Investigation Officers had changed for the worse since 2014 (See Appendix 1 for more information on these survey results).



In addition to the reduction in post-mortem facilities, we are also concerned that this reduction in diagnostic facilities risks reduced provision of diagnostic tests and tests required for trade and export, which could result in additional workload for remaining government laboratories and partner facilities, potential loss of expertise in these areas and overall negative impact on risk identification and trade. BVA has heard concerns from members around the turnaround time of current diagnostic testing and is concerned that this is acting as a disincentive to submitting animal material for investigation and resulting in a loss of important data which is not fed back into the Government surveillance network.

Recommendation 6: Government resources for the existing Veterinary Investigation Centres in the UK should be maintained, with no further reduction of key structures and reporting routes in the scanning surveillance network across England, Wales, Scotland and Northern Ireland without the provision of viable alternatives to maintain coverage.

Recommendation 7: There should be greater cooperation and collaboration between APHA, AFBI and SACCVS in the provision of diagnostic tests and tests required for trade and export to ensure a robust and reliable cost-effective service for veterinary surgeons and their clients to encourage contributions to the surveillance system while ensuring best value for the taxpayer.

Adopting new approaches to data collection and feedback

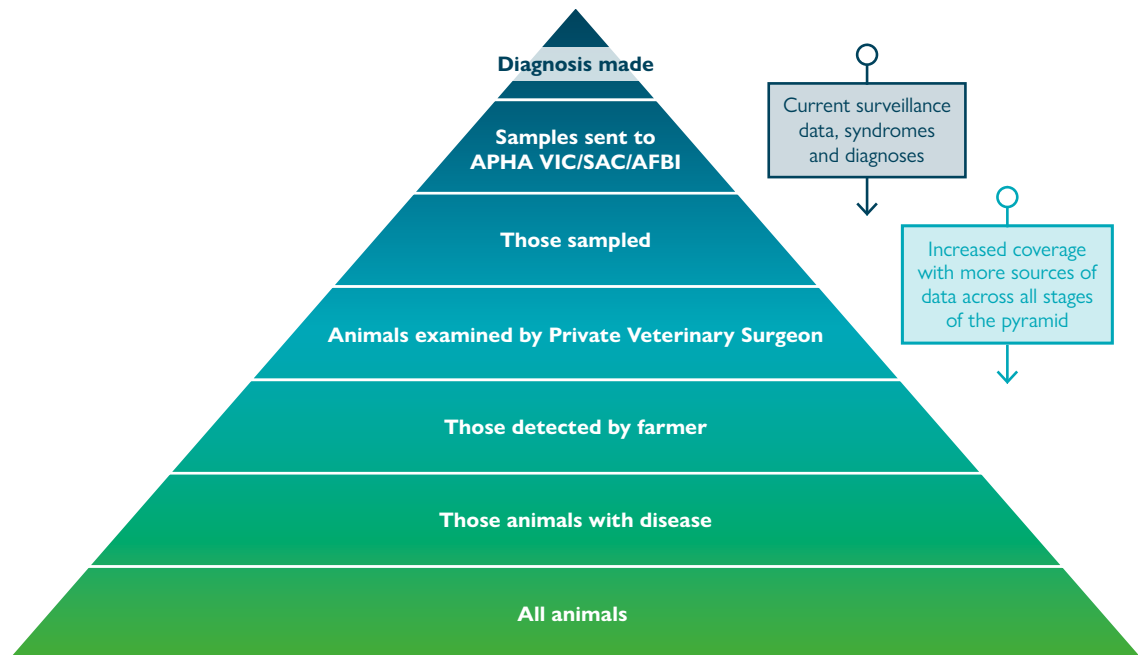
The UK has a well-established network of scanning surveillance which can be enhanced through the exploration of new data sources and data collection and feedback practices. BVA supports the use of syndromic surveillance or ‘health informatics’²⁴ to increase the coverage of the current scanning surveillance network across species sectors. Syndromic surveillance – that is to say the real-time collection, analysis, interpretation and dissemination of health-related data – enables the early identification of the impact (or absence of impact) of potential human or veterinary public-health threats across species areas.²⁵



24 Health informatics is the reuse or repurposing of existing health data for research or surveillance.

25 Pig Health and Welfare Council (PHWC), 2017. 'Report of Roundtable on Syndromic Surveillance in Pigs' [pdf] Available at: <https://pork.ahdb.org.uk/media/273228/phwc-ss-roundtable-report-2016.pdf> [Accessed: 8 January 2018].

Figure 2 (adapted from Richard Irvine, Head of APHA Surveillance Intelligence Unit, 2017): The surveillance pyramid



It is important to recognise the synergistic benefits of increasing the sensitivity of surveillance data currently collected across the UK through the collection of health information and clinical disease events from additional sources eg. health records, market monitoring, abattoir reports²⁶, farm assurance schemes and fallen stock reports. This data is not at present systematically collected in the UK, with only data from diagnostics submissions being routinely collected through the Veterinary Investigation Diagnosis Analysis database systems (VIDA – see **Glossary of terms [page 28]** for full definition).

Figure 2 (page 15) illustrates the ‘surveillance pyramid’, at present livestock diagnostic data is only collected from the top three levels of the surveillance pyramid. A shift towards syndromic surveillance would allow for clinical data from disease events to be collected across more levels, levels at which diagnostic submissions are not made, thus increasing sensitivity as data is collected from more sources.

BVA recognises that whilst syndromic surveillance expands data capture and sensitivity, it also reduces specificity in terms of the identification of clinical syndromes and diagnosis. However, in the current climate of resource constraints and remodelling of traditional diagnostic surveillance services, syndromic surveillance represents a means of maintaining coverage within the surveillance system, whilst incentivising collaborative engagement and data sharing amongst key stakeholders such as animal keepers, veterinary professionals, private veterinary practices and private laboratories. All are key aims set out in the Kinnaird Review²⁷, Surveillance 2014²⁸ and by the OIE who have highlighted:

*“...the need to strengthen surveillance and early detection systems for diseases of domestic and wild animals throughout the world and recommends making this a major objective of official health policies is throughout the world.”*²⁹

26 van Klink, E, Prestmo, P & Grist, A, 2015, ‘Animal Health and Disease Monitoring in the Abattoir’. *Livestock*, vol 20., pp. 330–335.

27 The Scottish Government, 2011. ‘The Review of Veterinary Surveillance: How information on animal disease is gathered, analysed and disseminated in Scotland’ [pdf] Available at: www.gov.scot/Resource/Doc/362344/0122619.pdf [Accessed: 8 January 2018].

28 Animal Health and Veterinary Laboratories Agency (AHVLA), 2013. Surveillance 2014. Changes to the delivery of Veterinary Scanning Surveillance in England and Wales. Available at: <http://webarchive.nationalarchives.gov.uk/20140707142907/http://www.defra.gov.uk/ahvla-en/disease-control/surveillance/new-vet-surv-model/> [Accessed: 2 January 2018].

29 OIE, 2017. ‘The OIE recommends strengthening animal disease surveillance worldwide’ [online] Available at: www.oie.int/for-the-media/press-releases/detail/article/the-oie-recommends-strengthening-animal-disease-surveillance-worldwide/ [Accessed: 8 January 2018].

The below case studies illustrate how syndromic surveillance is currently being employed in companion animal practice in the UK and in the dairy sector in the Netherlands.

These examples highlight key principles that could be replicated in approaches to collecting production animal, equine and wildlife syndromic data.

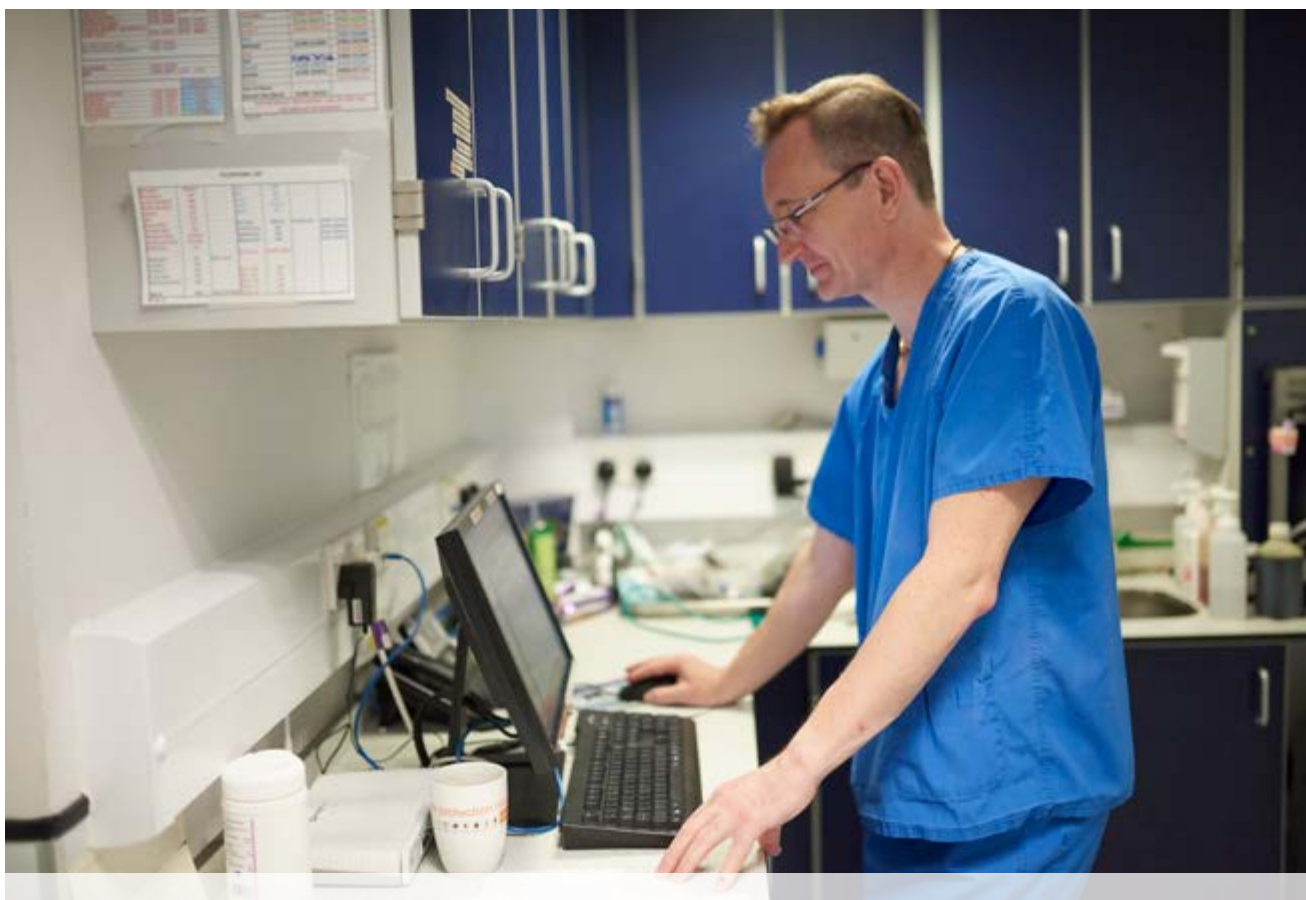
Case study 1 – SAVSNET and health informatics

SAVSNET, the Small Animal Veterinary Surveillance Network (www.liverpool.ac.uk/savsnet), is a national system operating to provide real time veterinary surveillance in companion animals, which utilises Big Data to better understand trends in animal disease. Real-time electronic health record data is obtained from two main sources; from veterinary practices and commercial diagnostic laboratories.

The data from practices includes a simple unique syndrome questionnaire that takes veterinary surgeons on average approximately seven seconds to complete at the end of consultations and links this to data already available within the patient health record (eg. age, gender, sex, treatment, clinical free text, owner postcode). Complementary data is currently collected from eight diagnostic laboratories, and includes the species, postcode of the submitting veterinary practice, the test performed and result, and is collected in whatever format is most convenient for the laboratory.

Participating veterinary surgeons benefit from real-time interactive benchmarking; these are currently provided free of charge as an additional incentive to participation. Other outputs include surveillance reports in the veterinary literature, “research-ready” data available to researchers through an application process and online access to data summaries for the general public.

The majority of the initial funding to pilot SAVSNET was from a consortium of commercial companies and Defra. Subsequent collaboration with BSAVA saw SAVSNET established as a national infrastructure. Current funding is from Biotechnology and Biological Sciences Research Council (BBSRC) emphasising the research value of these collected data, and the close links between research and surveillance, with additional funding from commercial/academic researchers. There is a dedicated core team of 4.1 FTE and input from academic staff.



Case study 2 – Surveillance of cattle health in the Netherlands: The national cattle health surveillance system (CHSS)

In the Netherlands, a national Cattle Health Surveillance System (CHSS) is in place that consists of several surveillance components that meet different surveillance objectives. The CHSS is commissioned to GD Animal Health (GD) by the government and Dutch producers' boards for dairy and veal. The main objectives of the CHSS are 1) early detection of (re) emerging diseases or new disorders and 2) monitoring trends and developments in cattle health.

For the first objective, a telephone helpdesk 'GD Veekijker' is operational and staffed by veterinary experts. This helpdesk receives approximately 4,000 calls about cattle each year. The aim of this helpdesk is to provide independent veterinary advice and in turn, the helpdesk gains information on animal health problems that may be related to (re)emerging diseases, which is valuable for early detection of animal health disorders and diseases. All telephone calls are registered in a central database and aggregated on a monthly basis. In addition, farmers can submit samples to the diagnostic laboratory or dead cattle for pathology. On a monthly basis, syndromic surveillance is carried out on the results of the calls, and lab submissions (both from the diagnostic lab and pathology). Additionally, weekly syndromic surveillance is conducted on data from milk deliveries to the dairy plants. The results are discussed to determine aberrations that may indicate the emergence of diseases.

For the second objective, a quarterly data analysis component is in place to monitor trends and developments in cattle health using routine census data. This surveillance component is called the Trend Analysis Surveillance Component (TASC). TASC contains key monitoring indicators that relate to cattle health such as parameters on mortality, fertility, udder health and antimicrobial usage. Multivariate multilevel models are used to analyse both trends in time and associations between cattle health indicators and potential confounders (eg. herd size, season, etc.).

The results of all surveillance components are aggregated and discussed among a group of veterinary experts and epidemiologists on a weekly basis. When notifiable diseases or serious animal health issues are suspected the authorities are contacted at once. Otherwise, the results are reported to the stakeholders on a quarterly level. In addition, information from the CHSS is used to inform farmers and veterinarians. The Dutch CHSS provides insight in cattle health at any point in time and has proven to be a sensitive system to detect (re)emerging diseases such as Bluetongue and Schmallenberg virus. The CHSS visualises trends in time, can be used to support or nuance signals, is sustainable and provide warnings or initiate changes in policy when unfavourable trends in animal health occur.

The example of SAVSNET, and the cattle health surveillance system (CHSS) in the Netherlands, highlight the following key factors at play to make a success of syndromic surveillance data input, capture, analysis and feedback across species areas:

- There should be a **standardised method of data input**.
- It should be **easy to submit data**, with a balance between the level of detail required and the associated increase in time and cost.
- There should be **sufficient connectivity and IT literacy** amongst those inputting data.
- Sharing of data should be **incentivised** by enabling veterinary professionals, veterinary practices, animal keepers and laboratories to derive professional, economic, logistic and public relations value from inputting data, on top of the value derived for animal health and welfare.
- There should be appropriate **technology, and skills and expertise**, to distil syndromic surveillance data from different sources.
- The **importance of qualitative data** should be recognised and there should be a mechanism for capturing this.

- Data collection should include **consent for the anonymised sharing of data** to allow for its wider use.

Recommendation 8: BVA calls on the UK Governments to increase the coverage of the scanning surveillance network through the use of syndromic surveillance and the repurposing of existing health data or data on clinical disease events eg. health records from private practice, private laboratories, abattoir reports, market monitoring, farm assurance schemes or fallen stock reports.

Recommendation 9: Submission and sharing of data should be incentivised by enabling veterinary professionals, veterinary practices, animal keepers and laboratories to derive professional, economic, logistic and public relations value from inputting data, on top of the value derived for animal health and welfare.

Recommendation 10: A respected, independent body should be identified as the trusted 'honest-broker' of data and information.

Optimising relevant skills and expertise

As Governments and Government-partner initiatives look towards modernising current methods of collecting surveillance data, it is important that any remodelled network of scanning surveillance is supported by teams with the relevant skills and expertise. In practice, this means that as surveillance systems make better use of data from multiple sources, there is a need to distinguish between the different strands of expertise needed to maximise efficiency and adequately resource these differing roles.

Additional resources for Veterinary Investigation Officers, supporting staff, the Surveillance Intelligence Unit (SIU) and Surveillance Epidemiology and Data Analysis (SEDA) are vital to enable delivery of effective scanning surveillance in this context.

Since 2012, in England and Wales there has been a reduction in Veterinary Investigation Officer FTEs from 48 in 2012 to 23 in 2018.³⁰ We are concerned that this is resulting in a loss of vital expertise and a disintegration of the communication flow and crucial relationships between Veterinary Investigation Officers and local veterinary practices that underpins the success of the scanning surveillance network.

Consequently, BVA calls for no further reductions in the number of Veterinary Investigation Officers (or partner facility equivalent) in England and Wales. Rather, the role and status of Veterinary Investigation Officers across the UK should be reinforced in order to incentivise the role of Veterinary Investigation Officer or equivalents as a career option.

To achieve this, BVA supports the development of a clearly defined career pathway for Veterinary Investigation Officers, this could include a diversification of the role to incorporate opportunities to undertake research, and partake in community outreach with local veterinary practices, re-establishing the communication flow between VIOs and local practices eg.

through creating a network of Practice Liaison Officers as nominated points of contact for VIOs to engage with at a local level in order to foster regular engagement with Veterinary Investigation Centres. The career pathway should ensure appropriate use of Veterinary Investigation Officers' clinical/epidemiological knowledge, capacity and communication skills with private veterinary surgeons in the field, as opposed to overburdening the role with administrative responsibilities. As a wholly- or part-funded Government role, the role of the Veterinary Investigation Officer should also offer opportunities to undertake secondments and move laterally across other Government departments or agencies.

In order to attract and retain high quality Veterinary Investigation Officers and value the holistic service they provide at both a local and national level, overall remuneration for the role (including pension and other benefits) must be brought in line with rises in inflation, as well as being competitive and equivalent to other roles demanding equivalent skills and experience within the veterinary market across the UK. Fundamentally, remuneration for Veterinary Investigation Officer roles in England and Wales should be improved to be better aligned with disease investigation roles requiring equivalent experience, expertise and responsibility in other parts of the UK.

30 APHA figures shared with the BVA



Further, as the UK Governments explore possibilities for improved data sharing and capture from multiple sources^{31,32}, it is paramount that relevant expertise in data analysis, assimilation and feedback is harnessed to effectively manage the volume of data and deliver meaningful analyses and outputs to stakeholders. This will likely involve new training opportunities for existing staff in health informatics and/or big data epidemiology and the strengthening of the existing Surveillance Epidemiology and Data Analysis (SEDA) team within the Surveillance Intelligence Unit (SIU).

Communications experts are also required to optimise existing communications channels, better utilise digital communication platforms and ensure effective and timely communications about reporting routes, what data to report, diagnostic support and alerts when action or heightened awareness is needed.

Recommendation 11: There should be no further reductions in the number of Veterinary Investigation Officers in England and Wales. Rather, across the UK the role and status of Veterinary Investigation Officers should be reinforced and engagement with local veterinary practices and communities increased in order to incentivise the role of Veterinary Investigation Officer or regional equivalent as a career option.

Recommendation 12: There should be a diversified career pathway for Veterinary Investigation Officers, as well as regional and partner provider equivalent roles. In England and Wales, remuneration should be improved and brought in line with rises in inflation and veterinary roles demanding equivalent skills and experience across the UK.

Recommendation 13: The UK Governments should explore opportunities for improved data sharing and capture from multiple sources, effectively harnessing relevant expertise in data analysis, assimilation and feedback to deliver meaningful analyses and outputs to stakeholders. As part of this, opportunities to strengthen the existing APHA Surveillance Epidemiology and Data Analysis (SEDA) team within the Surveillance Intelligence Unit (SIU) should be explored and resourced.

Recommendation 14: The UK Governments should make greater use of communications experts to optimise existing communications channels, better utilise digital platforms and ensure effective and timely communications about reporting routes, what data to report, diagnostic support and alerts when action or heightened awareness is needed.

31 Animal Health and Veterinary Laboratories Agency (AHVLA), 2013. Surveillance 2014. Changes to the delivery of Veterinary Scanning Surveillance in England and Wales. Available at: <http://webarchive.nationalarchives.gov.uk/20140707142907/http://www.defra.gov.uk/ahvla-en/disease-control/surveillance/new-vet-surv-model/> [Accessed: 2 January 2018].

32 The Scottish Government, 2011. 'The Review of Veterinary Surveillance: How information on animal disease is gathered, analysed and disseminated in Scotland' [pdf] Available at: www.gov.scot/Resource/Doc/362344/0122619.pdf [Accessed: 8 January 2018].

Rethinking traditional approaches to funding and coordination

Consideration should be given to fostering greater diversification of funding for scanning surveillance, which recognises multiple beneficiaries of disease surveillance and breaks down barriers between publicly funded animal disease surveillance and academic research. For example, Government, industry organisations, academic institutions, charities working in partnership and exploring opportunities to work collaboratively with human health through the 'One Health' agenda, such as joint-working on the important issue of antimicrobial resistance.

This partnership approach is currently being explored in human health through [Health Protection Research Units \(HPRUs\)](#)³³ – research partnerships between universities and Public Health England (PHE), which act as centres of excellence in multidisciplinary health protection research in England.

Scotland already demonstrates an alternative approach to funding and the integration of expertise that cuts across Government and research institutions. This integrated approach facilitates knowledge exchange between diagnostic services and research institutions, avoiding duplication of research/work/studies and fostering an integrated approach to advancing knowledge in animal health and disease monitoring. Integration is achieved through the following approaches:

- The Scottish Government part funds both SAC Consulting Veterinary Services (SACCVS), as part of Scotland's Rural College (SRUC) and Moredun Research Institute, to perform animal disease surveillance for farmed livestock and identify new and emerging domestic animal diseases through the Veterinary Services Programme.

- SACCVS receives income from fees charged to veterinary practices for post mortems and laboratory tests carried out under the Scottish Government funded programme.
- SACCVS carries out commercial activities including health schemes, diagnostic testing of equine and companion animal samples and analytical testing of plants, soils and animal feeds. Income from these activities carried out in competition with private laboratories enables SACCVS to maintain a network of local disease surveillance centres throughout Scotland.

33 www.nihr.ac.uk/about-us/how-we-are-managed/our-structure/research/health-protection-research-units.htm



Case study 3 – CRGV – the experience of a novel small animal disease outbreak at Anderson Moores Veterinary Specialists

Cutaneous and renal glomerular vasculopathy (CRGV) – also known as Alabama Rot – is a canine disease of unknown aetiology, manifesting as ulcerative skin lesions, predominantly affecting the limbs, ventrum, muzzle and / or tongue. It is variably associated with clinically relevant AKI which, when it develops, appears to be severe, relatively refractory to treatment, and fatal in >90% of cases. There is no apparent age or sex predilection and a wide variety of breeds have been affected since the disease was first recognised in the UK in 2012. There appears to be a winter/spring seasonality, which has led to much speculation regarding whether the cause relates in some way to colder temperatures and/or higher rainfall.

Anderson Moores Veterinary Specialists (AMVS) became involved in the surveillance of CRGV due to the geographical proximity of the first recognised cases, in the New Forest, Hampshire to the practice. A total of seven dogs with ulcerated skin lesions, subsequently developing AKI, were seen between December 2012 and February 2013. As this was clearly an unusual case presentation, a letter was placed in *The Veterinary Record* in March 2013, asking any colleagues seeing similar cases, to contact AMVS.

Since that time, AMVS have been in contact with animal and human health agencies, veterinary associations, the regulator of the veterinary profession and the local authority in the New Forest in order to identify a central organisation through which to report and escalate their findings to allow for appropriate action to be taken. These organisations include: AHT, New Forest District Council, the Forestry Commission, the Environment Agency, the Health Protection Agency, Public Health England, Veterinary Laboratories Agency, Veterinary Poisons Information Service, APHA, RCVS, BVA and BSAVA.

Direct reporting of CRGV surveillance fell outside of the remit of all of these organisations. Therefore, since November 2012, AMVS, in conjunction with Vet 4 Pets, have continued to monitor CRGV case numbers and keep members of the public and the veterinary profession informed about case numbers and locations. However, with a lack of a coordinating central organisation, the success of this monitoring has relied on practitioner will and resource on top of an already heavy case load within private practice.



Case study 4 – Wildlife health surveillance at The Royal (Dick) School of Veterinary Studies (R(D)SVS), University of Edinburgh

Opportunistic health surveillance of several important native wildlife species (eg. red squirrels, Scottish wildcats, raptors) has been undertaken at R(D)SVS over the past 20 years. These surveillance undertakings have been borne out of the personal research and conservation interests of a few key staff members. Sampling is largely conducted through opportunistic scanning surveillance where a network of contacts submits carcasses voluntarily, contributors include NGOs, species interest groups, wildlife rangers, and members of the public.

These networks have, in the main, been established through direct personal contact, word of mouth, and via relevant websites. At present there is no specific funding or staff time allocation to support submission, post-mortem examination, diagnostic testing, and reporting feedback. Surveillance activities are thus largely achieved and subsidised by the goodwill and interest of the personnel involved and strong personal relationships with other research or diagnostic agencies, such as the Moredun Research Institute, AHPA Weybridge, or via student projects and targeted grant applications.

In 2016 R(D)SVS established a successful country-wide surveillance scheme using raptors as indicators of ecosystem health, which was made possible through a PhD studentship, and is thus time-limited. Many novel findings of both public health, animal health and conservation significance have arisen, including the discovery of the human form of leprosy in red squirrels, first detection of squirrelpox virus moving into Scotland, first detection of feline immunodeficiency virus (FIV) in wildcats, and identification of an emerging parasitic infection causing high mortality in palmate newts.

However, there is no formal reporting structure or centralised database to collate these important findings. Instead, findings are collated and stored locally and conveyed by publication in scientific journals, dissemination at relevant conferences, through the media and via professional networks of wildlife veterinarians and biologists.

Recommendation 15: Consideration should be given to taking a blended funding approach to surveillance research and delivery with the UK Governments working in partnerships to co-fund projects with research institutions (eg. Research Council UK), industry organisations or charities.

Recommendation 16: As the Animal Health Surveillance Governance Board for England and Wales reaches the end of its three-year term, its effectiveness should be robustly reviewed to ensure an appropriate governance structure is maintained.

Moreover, existing Government scanning surveillance infrastructure and surveillance reporting routes across the UK nations should be enhanced in order to ensure joined-up working across species groups and organisations carrying out surveillance activities, such as small animal and wildlife disease. These areas have a potential to impact on human health, with zoonotic disease and the growing threat of antimicrobial resistance, as well as acting as sentinels for other areas of human and animal health. With this in mind, the value of these areas of surveillance should not be overlooked. **Case studies 3 (page 21) and 4 (page 22)** demonstrate the gap in coordination where key animal health and disease information could be better integrated and utilised within the UK surveillance network. At present, surveillance reporting and action relies on independent practitioner understanding, will, resource and funding.

Recommendation 17: Existing Government and Government-partner initiative scanning surveillance infrastructure and surveillance reporting routes across the UK nations should be expanded to provide defined reporting routes for small animal surveillance and more coordinated ways to report wildlife and equine disease surveillance to ensure joined-up working across species groups and organisations carrying out surveillance activities.

Recommendation 18: As the UK Governments consider legislation surrounding wildlife rehabilitation centres, regard should be given to disease investigation, surveillance procedures and reporting routes for disease incidents recognised at wildlife rehabilitation centres.

Case study 5 – The impact of language and influence of the appropriate voice

BVA ran its ‘Surveillance: use, understanding and engagement across the veterinary profession’ survey for England and Wales, encouraging vets working across all areas, including large animal, equine, mixed, small animal and those not currently in clinical practice to tell us how they valued and engaged with surveillance reporting.

The first month in the field yielded only 35 responses from small animal practitioners, in comparison to 96 from large animal and mixed. The BVA surveillance working group discussed this difference in response rate and raised concerns about the terminology used within the communications to promote the survey such as ‘scanning surveillance’ and ‘disease surveillance’. This terminology was considered to be traditionally associated with production animal herd health as opposed to individual companion animal medicine, leading the group to think that the survey was not resonating with small animal practitioners as an information gathering exercise targeted at their experiences.

The working group decided to change references to ‘scanning surveillance’ and ‘disease surveillance’ in the promotional communications targeted at small animal practitioners to ‘animal health and disease monitoring’ and measure any changes in engagement.

The British Small Animal Veterinary Association (BSAVA) then circulated the amended communications to their membership and the response rate to the survey increased from 36 responses to 187 in just four weeks, comprising 51% of the total vets in clinical practice that responded to the survey.

This simple change in terminology highlights the importance of using the right language to ensure surveillance messaging resonates with the target audience and also shows how engaging through the appropriate specialist veterinary division (BSAVA) added weight to the perceived relevance of the survey, in turn increasing engagement.

Articulating the value of surveillance through education

In order to ensure that the value of veterinary surveillance and animal health and disease monitoring is embedded in the mindset of the veterinary workforce and that veterinary graduates are equipped with the knowledge to participate in and navigate surveillance networks, consideration should be given to how animal disease surveillance across species areas is incorporated into the RCVS Day One Competences, the RCVS Professional Development Phase and current undergraduate curricula.



RCVS Day One Competences currently specify that newly qualified veterinary surgeons should possess underpinning knowledge and understanding of 'veterinary public health issues, including epidemiology, transboundary epizootic disease, zoonotic and food-borne disease, emerging and re-emerging diseases, food hygiene and technology.'³⁴

However, the RCVS Day One Competences should be further developed to include specific reference to the current scanning surveillance system in order to ensure that veterinary graduates are equipped with the skills required to participate in surveillance activities and knowledge of how to navigate existing networks. For example, Competence 11 states that newly qualified veterinary surgeons should be able to 'Use their professional capabilities to contribute to the advancement of veterinary knowledge, in order to improve the quality of animal care and public health.' As part of this competence, consideration should be given to specifying in the accompanying guidance that this may include participating in surveillance activities for emerging and re-emerging disease.

Further, teaching content and the integration of material relating to disease surveillance and animal health and disease monitoring across university curricula should be reviewed in order to incentivise participation in disease surveillance reporting. We recognise the strain on current undergraduate programmes and, with this in mind, would support approaches that seek to integrate and embed the value of surveillance, as opposed to creating additional burden on current curricula delivery. These approaches could include:

- Illustrating the clinical, business and professional value of surveillance eg. awareness that carrying out diagnostic post-mortem examination can count as CPD or that 'Laboratory and Pathology' constitute part of the core standards in the RCVS Practice Standards Scheme;
- Ensuring veterinary graduates are aware of the advice and support available from Veterinary Investigation Officers, partner facilities and regional equivalents on livestock health and disease monitoring and how to successfully navigate and report into these. Equally, veterinary graduates should be aware of how to participate in small animal, equine and wildlife surveillance initiatives, as well as the relevant practice management software required to feed into these;
- Encouraging active involvement of veterinary school clinics in capturing and contributing to surveillance data;
- Equipping veterinary graduates with the skills to value surveillance reports and apply the information presented in these reports to their practice and client advice by

integrating knowledge from surveillance reports into diagnostic approaches, herd health planning, biosecurity schemes and individual health planning;

- Ensuring that the relevant language is employed across course material to engage veterinary students across the different areas of animal health (see **Case study 5, page 23**).

Recommendation 19: RCVS Day One Competences should be further developed to include specific reference to practical skills in surveillance activities (contributing to and using surveillance reports), which are consolidated by veterinary graduates throughout their Professional Development Phase.

Recommendation 20: Vet schools should review their curricula to ensure they reflect the clinical, business and professional value of surveillance and adopt approaches to incentivise participation in surveillance activities across species areas.

34 Royal College of Veterinary Surgeons (RCVS), 2014. RCVS Day One Competences. Available at: <https://www.rcvs.org.uk/document-library/day-one-competences/1day-one-competences-updated-26-march-2014.pdf>

Working collaboratively with stakeholders to explore innovative communication strategies

In order to improve communication of the value of surveillance reporting and facilitate participation in existing and developing services, the UK Governments should consider the development of a centralised web platform that clearly outlines the details of how to contribute to surveillance reporting across species areas, including small animal disease surveillance and wildlife surveillance, as well as where to access supporting resources.



In addition, as the way in which the veterinary profession and the wider public consume information continues to progress towards online platforms, the UK Governments should further adapt its surveillance outputs and communications in order to optimise engagement through these types of online and hand-held media, for example via Twitter, Facebook groups, apps, finger tips data. The recently launched [APHA Disease Surveillance Dashboards](#)³⁵ are a positive example of modernising surveillance outputs for the digital age and incentivising engagement through visualising data collected through the APHA network. Further consideration should be given to assess whether these communications projects could be funded through research grants or bids.

In order to increase engagement with surveillance reporting, consideration should also be given to applying behavioural insight frameworks to adapt current communications outputs and language use in order to influence behaviours eg. working with the [Behavioural Insights Team](#)³⁶ or applying their [EAST framework](#)³⁷ to review all communication outputs and assess how they could be adapted to be more impactful.

Further, BVA believes the value of the service provided by Veterinary Investigation Centres, partner post-mortem providers and regional equivalents should be better communicated to both veterinary undergraduates, private veterinary surgeons and farmers to increase participation in surveillance reporting and dialogue with local Veterinary Investigation Officers. This could be achieved by developing a formal infrastructure to support ongoing communications between private veterinary surgeons and Veterinary Investigation Officers. For example, creating a network of Practice Liaison Officers as nominated points of contact for Veterinary Investigation Officers to engage with at a local level or establishing a centralised telephone helpdesk (as explored in [Case study 2, page 17](#)) where private veterinary surgeons can obtain independent veterinary advice and in turn, the UK Governments could gather valuable qualitative information on animal health issues and the early detection of emerging or re-emerging diseases. Equally, this approach could be replicated via an online messenger format, appealing to those who prefer to communicate via online channels, this format may also facilitate the aggregation of qualitative information that can be collected via this communication route.

Whilst the Government has primary responsibility for communicating these messages, as the representative body for veterinary surgeons, BVA has a role to play in raising

awareness of surveillance reporting, the reporting routes available and the value of disease surveillance and health and disease monitoring amongst the veterinary profession. We would welcome opportunities to work in partnership with the Government, farming unions, the Kennel Club, the Jockey Club and academic institutions to explore innovative communication strategies with the aim of increasing participation and awareness of reporting routes across different species areas.

Recommendation 21: The UK Governments should consider the development of a centralised web platform that clearly outlines the details of how to contribute to surveillance reporting across species areas, including small animal, equine and wildlife disease surveillance, as well as where to access supporting resources.

Recommendation 22: The UK Governments should further adapt their surveillance outputs and communications in order to optimise engagement through online and hand-held media, for example via Twitter, Facebook groups, apps, finger tips data and extending the recently launched APHA Disease Surveillance Dashboards across the UK.

Recommendation 23: In order to increase engagement with surveillance reporting, consideration should be given to applying behavioural insight frameworks to adapt current communications outputs and language in order to positively influence behaviours and incentivise engagement.

Recommendation 24: The value of the service provided by Veterinary Investigation Centres, APHA partner post-mortem providers, SAC Disease Investigation Centres and AFBI laboratories should be better defined and communicated to both private veterinary surgeons and farmers to increase participation in surveillance reporting and dialogue with local Veterinary Investigation Officers to improve overall animal health management.

Recommendation 25: BVA has a role to play in raising awareness of surveillance activities, the reporting routes available and the value of disease surveillance and health and disease monitoring amongst the veterinary profession. We would welcome opportunities to work in partnership with key stakeholders to explore innovative communication strategies with the aim of increasing participation and awareness of reporting routes across different species areas.

35 <http://apha.defra.gov.uk/vet-gateway/surveillance/scanning/disease-dashboards.htm>

36 www.behaviouralinsights.co.uk

37 www.behaviouralinsights.co.uk/wp-content/uploads/2015/07/BIT-Publication-EAST_FA_WEB.pdf

Glossary of terms

APHA – Animal Plant and Health Agency

AFBI – Agri-Food and Biosciences Institute

CHSS – Cattle Health Surveillance System

FSA – Food Standards Agency

Health informatics – reusing / repurposing data for health research and surveillance.

OIE – World Organisation for Animal Health

PFIs – Points for information, surveillance matters of interest that do not require additional action or are not directly in the remit of the Veterinary Risk Group.

PHE – Public Health England

SACCVS – SAC Consulting Veterinary Services (part of Scotland's Rural College (SRUC))

SAVSNET – Small Animal Veterinary Surveillance Network

Syndromic surveillance – the real-time collection, analysis, interpretation and dissemination of health-related data to enable the early identification of the impact (or absence of impact) of potential human or veterinary public health across species areas.

Scanning surveillance – the collection of diagnostic data to enable the timely detection, investigation, characterisation, assessment and management of animal-related new and re-emerging threats and associated risks in livestock and wildlife.

Surveillance Intelligence Unit – APHA's Surveillance Intelligence Unit (SIU) manages veterinary scanning surveillance activities to quickly detect, characterise and manage threats and risks in livestock and wildlife in Great Britain. The SIU includes the **Species Expert Groups veterinary leads**³⁸ and the **Surveillance Epidemiology and Data Analysis team**³⁹ who collate analyse and produce surveillance reports from data submitted into the GB surveillance network.

Vet Compass – shares and analyses veterinary clinical information to understand the disorders and improve the welfare of companion animals.

VIC – Veterinary Investigation Centre

VIDA – Veterinary Investigation Diagnosis Analysis database that holds core diagnostic data submitted to Veterinary Investigation Centres, APHA partner post-mortem providers and SAC Disease Investigation Centres

VIO – Veterinary Investigation Officer employed by APHA

Veterinary Risk Group (VRG) – The Veterinary Risk Group (VRG) was established by Defra to provide a systematic and timely assessment of threats and vulnerabilities to animal health by identifying, assessing, characterising, prioritising and escalating identified threats. Membership includes veterinary surgeons and scientists with strong links to government policy teams across the UK who report into the four UK Chief Veterinary Officers. Ultimately, the VRG aims to decrease the impact of animal-related (animal health and welfare) threats to the UK by dealing with threats rapidly and effectively.

38 <http://apha.defra.gov.uk/vet-gateway/surveillance/seg/index.htm>

39 <http://apha.defra.gov.uk/vet-gateway/surveillance/scanning/index.htm#SEDA>

Appendix 1

‘Surveillance: Use, understanding and engagement across the veterinary profession.’
Top line survey results for England and Wales, Scotland and Northern Ireland. For more information please contact policy@bva.co.uk

1. Respondents

	England and Wales	Scotland	Northern Ireland
Clinical Practice	71% (376)	69% (62)	60% (12)
Other (Academia, Government, Retired, students)	31% (154)	31% (28)	40% (8)
Large animal (including pigs and poultry)	19% (99)	15% (8)	18% (2)
Mixed	9% (46)	31% (17)	64% (7)
Small Animal*	35% (187)	44% (24)	18% (2)
Equine	6% (10)	4% (2)	
Other**	n/a	6% (3)	
Total***	530 responses that indicated practice areas (546 responses with usable data for the survey overall)	90 responses that indicated practice areas (92 responses with usable data for the survey overall)	20 Responses indicating practice area (21 responses with usable data for the survey overall)

*Whilst the England and Wales survey was in the field, the Surveillance Working Group changed the language used within communications targeting small animal practitioners to try to incentivise engagement as the response rate had been relatively low. The working group decided to change references to ‘scanning surveillance’ and ‘disease surveillance’ in the promotional communications targeted at small animal practitioners to ‘animal health and disease monitoring’. The British Small Animal Veterinary Association (BSAVA) then circulated the amended communications to their membership and the response rate to the survey increased from 36 responses to 187 in just four weeks, comprising 51% of the total vets in clinical practice that responded to the survey. This language change was then implemented across all communications targeting small animal practitioners used to promote Scotland and Northern Ireland surveys.

**We inserted this option after the England and Wales survey ran based on responses we were receiving from those working in wildlife, zoos or private laboratories.

***As ‘Are you a vet working in clinical practice?’ and ‘What is your main area of practice’ were asked in succession, there may be drop offs in participation between survey questions and the total number of respondents across practice areas may be less than total number who indicated they worked in clinical practice.

2. Attitudes

According to the vets surveyed in England and Wales (base 546), the four most important purposes/values of veterinary surveillance are:

1. Detection of new and emerging threats.
2. Detection of threats to public health through food or other links to animals.

3. Improved animal health and welfare (especially important to small animal vets).
4. Detection of exotic notifiable disease (especially important to large animal vets).

This was consistent across Scotland and Northern Ireland surveys.

3. Financial responsibility

In your view how should financial responsibility for the costs of national surveillance be shared between Government and Industry?

	England and Wales (542)	Scotland (92)	Northern Ireland (21)
Wholly Government funded	15% (80)	11% (10)	24% (5)
Majority Government funded	38% (206)	48% (44)	38% (8)
Shared equally between Government and industry	38% (205)	33% (30)	33% (7)
Wholly funded by industry	0% (1)	1% (1)	0% (0)
Majority industry funded	3% (18)	2% (2)	5% (1)
Don't know	6% (32)	5% (5)	0% (0)

4. Surveillance reports

Readership

- 72% of vets questioned (546), and 94% of vets working in large animal practice (99), said that they read APHA/SAVSNET/AHT disease surveillance reports in England and Wales.
- 58% of vets questioned read these reports in the *Vet Record*, with 74% of large animal vets reading these reports in this format. 72% of respondents in NI read reports in the *Vet Record* (15) and 63% of respondents in Scotland read reports in the *Vet Record* (92).

Types of reports

The most popular reports were cattle, small ruminant and wildlife. In Northern Ireland and Scotland, the most popular reports were APHA cattle and small ruminant, as well as AFBI/SACCVS cattle and small ruminant, with more or less equal readership of the two types or reports.

Use

- The main use of surveillance reports was for practitioner information across all nations.
- The second highest uses of surveillance reports were for CPD and farm health planning.
- In Scotland, it was indicated in free text answers (3) that these reports were used for teaching.

Improvements to surveillance reports

What additional information and/or dissemination techniques would improve APHA surveillance reports? Tick all that apply.

	England and Wales (381)	Scotland (66)	Northern Ireland (15)
More information of specific diseases/conditions	66% (250)	52% (34)	60% (9)
More information as to how diagnoses were made	52% (200)	45% (30)	66% (10)
More information on how/where to access reports	35% (134)	29% (19)	60% (9)
Dissemination of key information on social media	35% (134)	38% (25)	47% (7)
Don't know	9% (35)	7% (5)	7% (1)
Other	6% (23)	9% (6)	13% (2)

5. Engagement

- 70% of vets in England and Wales felt their contact with VIOs had changed for the worse since 2014 (base 121).
- Vets in England were significantly more likely than those practising in Wales to feel that there had been a change for worse since 2014 (77% vs 43%).
- In comparison to the NI survey where 89% felt that services had not changed (base 15) and the Scotland survey where 37.5% were satisfied with availability and 45% said access had not changed (base 24).
- However, 80% of vets surveyed in England and Wales said they made post-mortem submissions and sample submissions to APHA/Partner facilities. In Scotland 83% vets surveyed (base 22) made post-mortem submissions and 96% made sample submission to SACCVS facilities. In Northern Ireland, 100% of vets surveyed (base 9) said that they made post-mortem submissions and sample submissions to AFBI facilities.
- Experiences were largely positive.

6. Barriers to engagement

In England and Wales, access problems due to distance, slow turnaround times and perceived high costs were cited as the most common reasons for not using APHA/partner facility services. In Scotland, the only reason cited for not using SACCVS was access problems due to distance. No data was collected on this issue for Northern Ireland.

7. Data sharing

- In England and Wales, of those vets who reported doing post-mortem examinations in-house (Base – 131) the majority of data obtained from vets' post-mortem examinations is held only at a practice level (73%) or on farmer records (62%).
- In Scotland and Northern Ireland, of those vets who reported doing post-mortem examinations in-house the majority of data obtained was similarly held only at practice level or on farmer records.
- Interestingly, 64% of vets in England and Wales (base 140) said they would be willing to share their data. This was echoed in Scotland with 77% (base 22) and Northern Ireland 78% (base 9) saying that they would also be willing to share data.

8. Awareness of resources and services

- In England and Wales, while more than half (57%) of large animal and mixed practice vets said they were aware of the APHA Animal Disease Testing system (base 138), only one in seven (14%) claimed to have used it.
- Three quarters (75%) of vets surveyed in England and Wales (base 138) were unaware of the recent update of APHA Vet Gateway.*
- 87% of vets are aware that APHA post-mortem examinations are subsidised (base 142).
- 82% of vets are aware of APHA's free to farmer carcase collection service (base 143).

***The Scotland and Northern Ireland surveys were launched several months after the first launch of the APHA disease surveillance dashboards, so these questions were reformulated to specifically ask 'Are you aware of the APHA Disease Surveillance Dashboards that have recently been launched?'**

In Scotland, 45% were aware (base 10), 55% were not (base 11). In Northern Ireland, 45% said they felt that the dashboards were of interest to them and their clients, but 50% said they didn't know. In Northern Ireland – 77% (9) were not aware of the resource, however 77% (base 9) would be interested of something similar in Northern Ireland.

9. Recently graduated vets

In this career bracket the survey results suggested less awareness of reporting routes, resources and services available:

- **A quarter of vets** who have worked in practice for 8 years or less claimed not to know that APHA post-mortems are Government-subsidised in England and Wales.
- **A similar proportion (28%)** were unaware of the free to farmer collection service.
- Those who had recently graduated were the least likely to contact a VIO to discuss a difficult case and **the only career bracket to say they would contact a VIO but don't know how to.**
- In Scotland, however, all 5 vets who had worked in practice for 8 years or less would contact a VIO to discuss a case. However, 80% of them were not aware of APHA's disease surveillance dashboards.

10. Carcass collection service

- 82% of those surveyed were aware of [the free APHA carcass collection service](#)⁴⁰ (base 143) but only 36% had used it.
- There were differing opinions on how well it is working: 13% some improvement needed, 13% satisfied with service, 10% working well.
- 79% of vets surveyed in Scotland said that this service would be of interest to them and their clients (base 24).
- 100% of vets surveyed in Northern Ireland said this would be of use to them and their clients (base 9).

11. Small animal

- 17% of vets surveyed in England and Wales (base 244) believe that national small animal disease surveillance is available (17% in Scotland (base 36); 11.1% in Northern Ireland); 45% of vets surveyed in England and Wales think it is becoming available (42% in Scotland; 22% in Northern Ireland).
- 83% of vets surveyed in England and Wales (base 244), believe that national small animal disease surveillance would be useful (86% in Scotland (base 36); 89% in Northern Ireland).
- One in six vets (17%) input into a national practice management and research surveillance system in England and Wales (244), 5.5% in Scotland (36). 75% of vets in Northern Ireland (base 9) do not input into a national practice management and research surveillance system.
- 67% of vets who do not submit pets for post-mortem say that their clients do not want this service in England and Wales (base 78); 72.2% of vets in Scotland (base 18) say that clients do not want this service; 43% of vets in Northern Ireland (base 7) said that clients do not want this service.

12. Equine

- Two of the 70 equine and mixed practice vets surveyed in England and Wales said that they had submitted equines for post-mortem to APHA/partner facilities in the past 12 months. In Scotland, 14% of vets said they had submitted 1–4 equines for post-mortem (base 14), 79% of vets never submit equines for post-mortem. In Northern Ireland (base 7), 86% vets don't submit equine for post-mortems, 14% send 1–4 carcasses to private facilities, and 14% send equines to AFBI labs for post-mortem.
- Many vets said that their clients did not want this service.

13. Incentivising engagement

At the end of the survey we asked all participants to tell us what would incentivise them to engage more with surveillance reporting. Top 5 answers from multiple choice were:

- Free training
- Subsidised testing
- Clearer guidance on what constitutes useful data/what conditions to report on
- Local data feedback
- Clearer guidance on how to use current systems and their services

In both **Scotland and Northern Ireland**, the top 5 was slightly different, although top 2 incentives were the same:

- Free training
- Subsidised testing
- Increased value derived from the system
- Assurance of data protection and client confidentiality
- Real time reporting

⁴⁰ <http://apha.defra.gov.uk/vet-gateway/surveillance/diagnostic/pme.htm>

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