BVA British Veterinary Association | Policy statement

BVA Policy Position on Artificial Intelligence in the Veterinary Profession

Introduction

Artificial Intelligence (AI) in its many forms is quickly emerging as a significant technology across the veterinary profession. Whilst the benefits of the effective application of AI technologies are potentially limitless, there are also many challenges that may arise from poor implementation of AI. Consideration must be given to the impacts that these technologies could have for the veterinary professionals that use them and the animals under their care.

This policy position will provide some general principles to underpin the safe and effective use of AI technologies across the profession, considering different facets from its role in clinical practice (including diagnostics), education, research, epidemiology, government, administrative tasks and practice management.

BVA considers that a positive and open-minded approach to AI, viewing it as a tool to support the vet and wider vet team, is the best way forward to ensure that the profession is confident applying these technologies in their day-to-day work. As a profession we must ensure the development and deployment of veterinary AI technology is done in an ethical and transparent way.

Definitions

Artificial Intelligence can be defined as the use of digital technology to create systems capable of performing tasks commonly thought to require human intelligence.[1] A complicating factor in any discussion around AI is the potential for confusion around terminology. A comprehensive list of definitions can be found through the NHS AI Dictionary which is where we will be drawing our definitions. Key definitions for this document are contained in Annex A with accessible language to help with understanding and we encourage vets and the wider vet team to familiarise themselves with these terms.

General Principles

1. **AI is a tool** - AI and the technologies it powers are tools to support veterinary professionals in their various roles (similar to other tools such as a stethoscope or ultrasound scanner), rather than a replacement for vets; thus, AI should be viewed as a tool to assist and enhance the work of vets. As the regulated professional and the human in the system vets are and should remain responsible for the decisions made using these tools. Being able to confidently use these tools will require curiosity, training, and assurance.
2. **AI literacy** – As AI is developed and deployed in the veterinary sector it is essential that vets and veterinary teams develop an understanding of its uses and limitations. Developing the ability to validate and critically compare AI generated outputs against current best practice will be key to ensuring safe, positive outcomes for animals and the profession.
3. **Vets in AI development** – Veterinary professionals should actively participate in the design, development, and validation of AI tools for animal health and welfare. Clinical expertise is essential to ensure these technologies address real-world needs, meet appropriate quality standards, incorporate relevant evidence-based practices, and generate trustworthy outputs that enhance patient care.
4. **Awareness and management of bias** – Bias in AI systems can arise from the data used to train them or from the algorithms that process that data. Veterinary users should understand how a system

[1] NHS AI Lab, *AI Dictionary*, https://nhsx.github.io/ai-dictionary/?term=ai

was trained and the contexts in which bias may appear. Awareness of these risks and that bias may evolve over time is essential to the accurate, ethical, and equitable use of AI tools.

5. **Confidence and agility** – The rate of development within AI is currently very rapid, this means that technologies will change regularly. Vets and the wider vet team must be confident understanding how AI technologies are advancing allowing them to adapt to potentially swift changes in the tools and systems available.
6. **Consent, privacy and client trust** – AI systems often involve complex data flows including the use of third-party technologies that may not always be transparent to users. Vets should be mindful of what data is supplied to technologies during their use and ensure that the handling of this data complies with the relevant legislation, currently UK GDPR[2] and DPA 2018[3]. Vets and the companies they are working in should ensure clients are made aware of how their and their animal's data is used and protected.
7. **Human oversight and responsibility** – As veterinary professionals, the regulated humans assume responsibility for the outcomes of the tools they use, therefore AI should operate under meaningful human oversight. This is essential to ensure safe, accountable, and ethical decision making. Models such as Human-in-the-loop (HITL) and Human-on-the-loop (HOTL) are able to integrate human intelligence with AI processes. HITL combines human intelligence with machine learning capabilities, it involves active and continuous human participation, integrating humans into the AI process flow. HOTL involves humans acting as a supervisor, intervening when necessary. It still has the human element, but the end-user can see the system's results before human verification. The goal is to use human input to maximise the potential of AI while mitigating its risks.
8. **Explainability** – AI technologies deployed in the veterinary and animal health and welfare field should be engineered to have clear and transparent processes and these should be able to be easily understood by vets, their teams and animal owners. Principles of explainability where an AI tool can show what data has been used and how to reach a conclusion should be easily accessed and available.

Recommendation 1: All veterinary professionals should actively engage with understanding AI and follow these principles when considering the use of AI in their work.

Recommendation 2: Resources should be developed to assist vets in gaining an understanding of how AI tools work and how they can be evaluated.

Recommendation 3: Developers of veterinary and animal welfare tools should provide accessible and explainable information to vets about how tools are developed and validated.

Opportunities and Risks

Opportunities of AI and supporting the Veterinary Profession in AI deployment

AI has the potential to deliver huge benefits to the profession and the animals under our care if harnessed correctly. Workload is consistently cited as a key factor in vets leaving the profession[4]. The effective deployment of AI across the vet profession could help reduce the workload burden on vets by reducing administrative tasks and streamlining routine processes and increasing efficiency. Emerging technologies that alleviate some of the more administrative focussed aspects of a vet's role should allow for more time to focus on aspects of the job that are more rewarding, or parts of the job that only vets can do.

AI technologies can integrate clinical records, imaging, lab results, and environmental information to support more timely and informed decision-making[5]. These technologies can be used to improve disease surveillance

[2] European Union. *Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulation)*, OJ L 119, 4.5.2016, 1–88. https://www.legislation.gov.uk/eur/2016/679/contents

[3] United Kingdom. *Data Protection Act 2018*, c. 12. https://www.legislation.gov.uk/ukpga/2018/12/contents

[4] Vetlife. *Burnout, Moral Injury and Compassion Fatigue*. April 9, 2025. https://www.vetlife.org.uk/wp-content/uploads/2025/04/Vetlife-Burnout-moral-injury-and-compassion-fatigue_9Apr2025.pdf

[5] Olalekan Chris Akinsulie et al. "The Potential Application of Artificial Intelligence in Veterinary Clinical Practice and Biomedical Research." *Frontiers in Veterinary Science* 11 (2024): 1347550. https://doi.org/10.3389/fvets.2024.1347550

and management of herd health[6], enabling earlier interventions, also within the practice to improve management of staff, clients, and pets. These capabilities contribute to One Health approaches by linking animal, human, and environmental health. The incorporation of greater amounts of high quality data will allow for better measurable patient outcomes and more individualised care.

These technologies also have the potential to broaden access to veterinary care. Remote triage and virtual consultation tools can reach those in remote and rural areas, and in zoo and wildlife settings. AI-enabled translation tools could help if consulting with clients who do not share a common language. AI adoption can position the profession at the forefront of technological innovation. It also creates opportunities for collaboration between vets, developers, and allied industries, ensuring tools are tailored to the unique needs of veterinary medicine.

Risks at the profession level from AI

The introduction of AI across the vet profession presents some significant challenges. It is vital that vets are aware of what these potential challenges are, so they can confidently address them.

Already there is an emerging disparity between those willing to trust and take on AI and those that are not. Recent results from BVA's Voice Survey found that 1 in 5 vets (21%) are using AI in clinical practice[7]. When vets were asked whether they intend to use AI, 18% said they intend to use it in the future compared with 40% who did not and 42% who were unsure. This presents a possibility where those who are more confident applying these technologies may be able to yield the greater benefits for themselves, their clients and the animals in their care whilst those who do not feel confident using AI may be "left behind". On the reverse side it may also present a hazard for those that are overconfident in using it yet unaware of the danger and risks its use can pose. This presents one of the greatest challenges to the profession, ensuring that the quality of care being delivered is maintained as AI technologies begin to take on more tasks. The variance in AI adoption and confidence could also disrupt team wellbeing and cohesion. Some colleagues may embrace these tools enthusiastically, while others may fear job displacement[8] or question the erosion of their professional role. Harnessing this diversity of views through open discussion, training, and strong leadership can help ensure technologies are introduced safely, equitably, and in ways that genuinely support the team.

Vets already face situations where clients use online information or AI tools like Large Language Models (LLMs) to question diagnoses and treatment decisions. As AI becomes more advanced, and more AI tools are provided direct to animal owners, clients may place even greater trust in its outputs, so vets need to be confident in addressing this. Overconfidence in AI advice can harm animal health and welfare if owners delay seeking help or attempt to treat their animals at home based on incorrect guidance. Vets play an important role in explaining both the usefulness and the limits of AI tools. While some AI tools advise owners to consult a vet, this is not guaranteed or enforced. Without proper guidance, owners may mishandle cases or even carry out regulated veterinary procedures without realising it. By understanding and communicating the strengths and limitations of AI, vets can help reduce these risks. Training provided to vets should enable them to explain this and work with clients to find the best way to manage patients, just as they do now. Regulation may also be needed to ensure AI providers clearly state these limitations and direct owners to seek professional veterinary care when appropriate.

Inappropriate data management and obtaining informed client consent are also emerging challenges around the use of AI across the profession. Vets handle significant amounts of personally identifiable information (PII) which is stored digitally. Providing access to the information to external AI providers is a point of risk for veterinary businesses. Data passed externally may be used for unintended purposes to which the owners of that data have not consented, data may also be at increased risk of leaks or hacking. Technologies that remove PII from data or allow for in house use of data by decentralised or open-source AI models may help to change these risks, but vets and veterinary businesses (as data controllers) must be aware of how data is used. This is a legal responsibility in the UK. The UK Government should provide clarity on where liability lies

[6] Victor E. Cabrera. "Artificial Intelligence Applied to Dairy Science: Insights from the Dairy Brain Initiative." *Frontiers in Artificial Intelligence* (2023). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11700617/

[7] British Veterinary Association, "1 in 5 Vets Is Already Using Artificial Intelligence in Daily Work," *BVA News & Blog*, May 29, 2025. https://www.bva.co.uk/news-and-blog/news-article/1-in-5-vets-is-already-using-artificial-intelligence-in-daily-work/

[8] Department for Science, Innovation & Technology, *Public Attitudes to Data and AI: Tracker Survey (Wave 4)*, GOV.UK, 2024. https://www.gov.uk/government/publications/public-attitudes-to-data-and-ai-tracker-survey-wave-4/public-attitudes-to-data-and-ai-tracker-survey-wave-4-report#familiarity-with-ai-and-views-of-its-impact

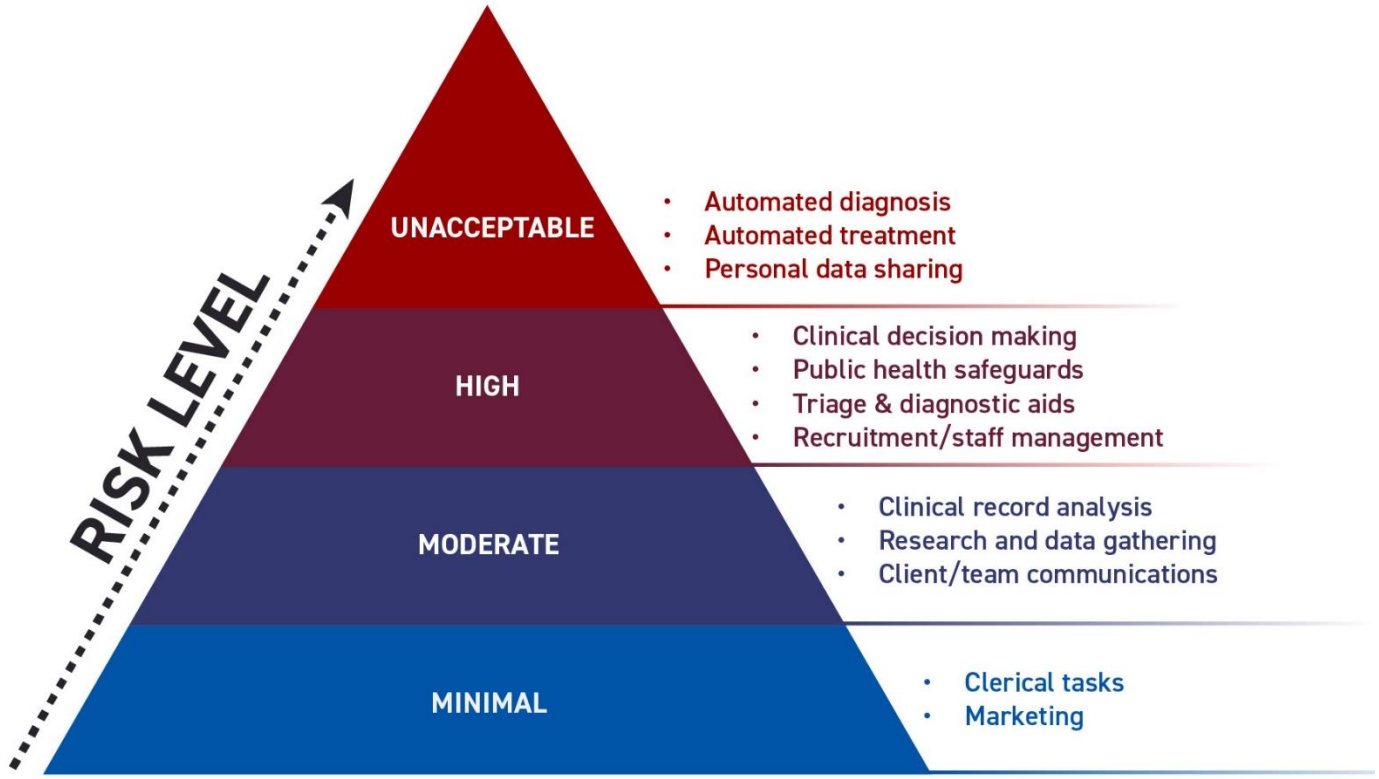
in this area and veterinary AI technology providers should be transparent about how any data they hold is used and secured.

A significant challenge with the use of AI systems is bias. This can emerge at every stage of the pipeline, from model design, optimisation choices, fine-tuning, augmentation (incorporating artificial intelligence technology into the workplace), and the decoding process (turning numbers or probabilities into actual words or sentences). AI tools might underperform or produce skewed recommendations for certain species, breeds, or socioeconomic client groups if those populations are underrepresented in the training datasets. Tools for administrative purposes, such as recruitment, may also be at risk of bias and exacerbate inequalities. Without active efforts to monitor and correct these imbalances, AI could inadvertently reinforce or create new disparities in care rather than resolve them. Given the many areas that bias can have an impact it can never be fully removed. It is vital that those using AI technologies understand bias, and how it can come about in AI generated results so the impacts can be shifted and reshaped to produce accurate and useful outputs. Explainability of datasets used in training, AI outputs in real-life scenario use, some clarity on how AI decisions are made, and how these factors may change over time is important in helping end users and those deploying AI tools to understand where bias may have occurred in the model's processes. Explainable AI (XAI) standards would be beneficial in helping users assess the usefulness and bias in tools and should be requested of any AI use.

Recommendation 4: Vet teams should openly discuss the use of AI in their workplace, and collectively agree how to integrate both practice and client-facing AI tools into decision making to help ensure technologies are used appropriately.

Assessing Risks

Risk pyramid of Artificial Intelligence use cases across the veterinary profession



AI use case (a specific situation in which a product or service could potentially be used) risk pyramid modelled on EU AI Act Legislation papers[9].

Assessing the risk of an AI system involves looking at the system itself and the use case for that system. The above pyramid looks at classifying the risk of the use case for AI in different veterinary settings. The list is not exhaustive but shows some of the currently more common or considered use cases and how they may be classified.

The degree of risk in AI use exponentially increases with the degree of autonomy an AI tool has. There is risk in giving AI the freedom to identify useful information without oversight; giving AI the autonomy to make decisions without validation; and risk in creating an environment where people implicitly trust AI. As demonstrated in the risk pyramid above, clinical risk ranges from low when it has no impact on treatment pathways or decisions and rises associated with the degree of influence on clinical decisions the AI has. Escalating to very high where the technology is autonomously deciding the treatment pathway or decisions on care for animals without a clinician intervening.

Those tasks lower down the pyramid may be undertaken with more confidence of safety than those closer to the top. As use cases move closer to the top, the importance of following the principles considered in this paper will become more critical as the impacts on animal health and welfare, professional standards, and people will be more significant.

The use cases above are considered from an individual animal health and veterinary professional risk point of view, businesses, governments and society may take differing views on the acceptability of or have differing appetites for the various levels of risk of different activities. As individual veterinary professionals when engaging with AI tools, this variance should be considered when assessing the risks presented by suppliers and demonstrates why the involvement of vets in the development of AI tools in the animal health and welfare sector is crucial.

[9] European Commission, "Regulatory Framework for Artificial Intelligence," *Digital Strategy – European Commission*, 2025, https://digital-strategy.ec.europa.eu/en/policies/regulatory-framework-ai

This highlights the need to consider the specific use case whenever an AI tool is employed, much as vets already do for the other tools they use in their roles.

Recommendation 5: Technologies must be suitably risk-assessed before being introduced to veterinary workplaces.

Uses across the profession

We have highlighted some of the key potential opportunities and risks around AI use broadly across the profession. The following sections take a closer look at specific sectors of the profession outlining opportunities and specific challenges for each. Some more detailed use cases applied across the profession and across species can be found in Annex B.

Area of the profession	Potential Opportunities	Potential Risks
Clinical Practice	• Improved access to care (AI-enabled triage, remote consultations, decision-support tools) • Improved clinical decision-making • Supported earlier interventions • Improved diagnostic capabilities • Improved triage and case prioritisation • Remote consultation and review of behavioural footage • Enhanced reproductive management with AI-supported prediction of optimal breeding times	• Accuracy and confidence in outputs • Data confidentiality and security • Overreliance on AI eroding clinical skills or judgement • Clinical decision making with diminished or no human oversight • Direct to owner tools that may 'diagnose' and infringe on the Veterinary Surgeons Act • Role changes • Increased 'digital divide' for both clients and professionals for those using AI vs. averse to AI adoption • Cross-border development/deployment
Admin and Practice Management	• Improved access to care (AI-enabled scheduling, automated reminders, and workflow optimisation to ensure timely appointments) • Improved communications to owners and practice staff (AI-generated updates, automated notifications, translation tools) • Greater business insights driving efficiency improvements • Improved sustainability - ordering, medicines, waste reduction • Content creation • Support team wellbeing by reducing workload and stress, and improving team communication and coordination • Optimised field and yard management	• Recruitment bias • Workplace role changes • Communications changes and challenges • Increased costs • Environmental sustainability • Data privacy and security

Education	• Enhanced practical and communication skills • Personalised and adaptive learning • Improved accessibility and inclusion • Support for student wellbeing and workload management • Future ready professional skills in an AI-enabled world	• An overreliance on AI simulations may reduce hands-on practical experience and real-world skill acquisition • Assessment integrity and validating student outputs • Reinforcement of inequalities through disparate access to and confidence using AI technologies • AI companies influencing veterinary education by encouraging exclusive use of their products
Research, Epidemiology and Government	• Improved research power and efficiency • Reduced reliance on live animal testing[10] • Improved drug discovery and development • Augmentation of limited datasets • Supported advancement of epidemiology and population health • More consistent grading and audit processes through automated data capture for meat hygiene and food safety processes • Earlier detection of notifiable or emerging diseases through more effective disease surveillance and improved risk assessment at borders	• Accuracy and reliability of outputs • Perpetuation of bias

Ethical Implications

As outlined above the increasing presence of AI in day-to-day life and within the veterinary profession presents a whole host of potential benefits and also some considerable challenges if improperly managed. Veterinary professionals have a duty to ensure the health and welfare of animals committed to our care and the ethical implications of AI use must be carefully considered to ensure that technological advancements do not compromise this fundamental priority. The increasing use of AI tools raises critical questions regarding accuracy, accountability, and the potential for unintended harm. By critically examining these ethical considerations, vets can harness AI responsibly, maintaining our commitment to the highest standards of animal care, whilst also ensuring vets themselves and their clients are not unduly harmed by unethical development and deployment of AI in delivering veterinary care.

Key ethical considerations

- **Consent and data governance:** Ethical issues arise around consent for use in clinical decision making in client-owned animals; around processing of personal data; and consent for sharing of animal health data with third parties.
- **Agency:** AI models work within defined parameters. This means they may not be able to take into account the context in which decisions are being made. Decisions involving animal health and welfare often involve complex context that will require the balancing of many factors that humans are best

[10] United Kingdom, "Animal Testing to Be Phased Out Faster as UK Unveils Roadmap for Alternative Methods," *GOV.UK*, November 11, 2025. https://www.gov.uk/government/news/animal-testing-to-be-phased-out-faster-as-uk-unveils-roadmap-for-alternative-methods

placed to manage.

- **Responsibility:** Vets are responsible for safeguarding animal health and welfare and for their patient outcomes, but challenges arise if decisions are made using AI outputs which are incorrect. Ethical use requires clear accountability from both vets and AI providers. The AI companies must provide confidence scores, suitable explainability, and external validation of models. Vets must be able to understand the technologies they are using and explain the outputs. If we define a professional as someone willing to accept liability for their expertise, then the ethical application of AI requires that the individual carrying the risk remains the decision-maker. In practice, this means maintaining a human-in-the-loop for any use case involving professional judgment and ensuring that human is sufficiently AI-literate to critically assess the system's outputs. Automation should be confined to administrative or clearly low-risk tasks where professional oversight is not required.
- **Transparency:** Transparency of the development and training of AI to veterinary professionals and transparency of use of AI to clients is important. This transparency allows users to ensure that appropriate tools are being used and that the appropriate decisions are being made. Being clear when and how AI has been used to make decisions improves trust in both the tools and the users of those tools.

AI Ethical Concern	Solutions to ethical issues when deploying AI
Data misuse Using AI without governance, exposing Personal Identifiable Information (PII) to third parties for unknown purposes without any knowledge or consent of the owner of the PII.	Avoid sharing PII with AI tools. Ensure use of software where any third-party AI tool is transparent about what it will do with the data. PII should be removed before data is passed to the AI tool where possible. Or the third-party tool is set to not train/learn from the data it assesses.
Automating empathy AI handling sensitive topics, like end-of-life care, which it cannot truly manage.	Do not ask AI to carry out tasks it is not suited for. High-risk decisions such as life or death circumstances should not be made by AI.
Two-tier care and assigning treatment "worthiness" AI benefits limited to those who can afford treatment, and outcomes decided based on the value AI puts on treatment and its outcomes.	Veterinary professionals must uphold their oath as they do in every other part of their role to pursue the work of the profession with integrity and accept responsibilities to the public, clients, the profession and the Royal College of Veterinary Surgeons, and that, above all the their constant endeavour will be to ensure the health and welfare of animals committed to their care.
Misassigned liability Holding someone accountable for decisions they did not make.	Human-in-the-loop safeguards to ensure accountability and quality. The vet or trained professional should always have the final say on what is done with the outputs generated by AI to ensure accuracy and context specific nuance.
Insufficient professional scrutiny Failing to evaluate AI as carefully as other clinical tools.	Vets must be as confident and competent using AI tools as they are with other clinical tools. They should be aware of software limitations, bad outputs to watch out for. Be aware of automation bias – the tendency to place more confidence in machine-generated outputs than human reasoning.
Ignoring outcomes Using AI in ways that compromise animal health or welfare or exceed its design.	Use the most appropriate tool for the specific use case and be aware of any contraindications.
Blind automation Approving AI-generated action plans without review.	Human-in-the-loop safeguards to ensure accountability and quality. The vet or trained professional should always have the final say on what is done with the outputs generated by AI to ensure accuracy and context specific nuance.

Most, if not all, of these ethical challenges around AI use in the vet profession, especially in clinical practice, can be effectively offset by practice wide AI policies and training. These policies must set clear boundaries for the uses of AI, where it should not be used, what data and information can be uploaded to these technologies, and how AI use is communicated with clients and how consent (if any) is sought. However, rather than being too prescriptive and risk-averse, it is important these policies encourage appropriate engagement with and

use of AI, and include recommendations for how to handle client queries from pet owner facing AI tools. Training needs should be identified to support practice-wide consistency in understanding and use. It may be helpful to publish client-facing AI policies to support transparency and understanding of the practice position.

Recommendation 6: All veterinary workplaces should have an AI use policy in place that addresses the above ethical concerns in a way that inspires transparent, confident use, and ability to discuss AI technologies with team members and clients. This policy should also include tools to monitor the impact of AI use in practice.

Regulatory Considerations

Currently there is limited legislation and regulation of AI within the UK, and none specifically related to the veterinary sector. It is important that appropriate regulation is established to ensure the safe development and application of these technologies in the veterinary profession. Safeguards must ensure vets remain central to all clinical decision-making regardless of AI sophistication. Growing use of AI in the veterinary profession requires a clear approach to regulation. Regulation should ensure that AI technologies are reliable, transparent, and used in ways that protect animal health and welfare and uphold professional standards, while still allowing space for innovation and progress.

While regulation in the form of legislation will likely form part of a national strategy under which we must all work, there is the potential for regulation of veterinary related technologies through already existing structures. The Veterinary Medicines Directorate has the powers to consider the regulation of veterinary technologies and the Royal College of Veterinary Surgeons can regulate how vets interact with these services. Both organisations have indicated they are looking at this area which could lead to safeguards and guidelines around vets' use of AI within their work.

It is necessary that veterinary professionals are empowered and able to assess the safety and governance of the tools available to them. This requires training of veterinary professionals and transparency and engagement from the developers of these tools. It also requires practices to develop ethically informed policies on AI use.

Governance structures of AI products and the companies that provide them should be robust and clearly defined. Safeguards can be considered as technical and operational and effective governance structures should include elements of both. Technical safeguards should include transparency and explainability of the training, testing, validating and explainability of the tool. Operational safeguards should demonstrate how technology is safely deployed, what feedback loops are present and where human in or on the loop checks are used. These safeguards should cover both how the products are developed and how they are maintained and evolved over time.

As discussed above the risk within AI systems can be viewed from many perspectives, the risks around governance in AI can be viewed as escalating in a similar pyramid. Governance risk ranges from low when the model is trained on a third-party's data and uses no PII data for its predictions, increasing to very high when the model uses animal patient & owner PII data provided to it to retrain the model in the future, and when it can input uncontrolled data.

Recommendation 7: International standards for explainability and governance should be developed for veterinary AI tools.

Recommendation 8: UK veterinary regulators (RCVS & VMD) must take responsibility for the active regulation of veterinary AI tools deployed in the UK.

Environmental Impact Considerations

The environmental impact of AI deployment is increasingly being scrutinised by users, campaigners, companies, and policy makers. The main focus of concern is on increased energy consumption, carbon footprint, water usage, and hardware lifecycles. Whilst for some there is no standardised measure of size of these impacts, some AI companies are making efforts to quantify them in order to improve[11].

[11] Amin Vahdat and Jeff Dean, "Measuring the Environmental Impact of AI Inference," *Google Cloud Blog*, August 21, 2025. https://cloud.google.com/blog/products/infrastructure/measuring-the-environmental-impact-of-ai-inference

Coupled with a consideration of the impacts of AI tools, should be the consideration of how AI is being used to address some of the biggest environmental challenges we face. This has included increasing food yields through better environmental modelling, more efficient situation and management of wind farms and smart grid management allowing better use of reusable energies.

A full consideration of the environmental balance of AI use is beyond the scope of this position. However some principles for guiding sustainable AI use are shown below.

Choose Wisely

- Use AI tools only when they add real value
- Pick smaller, task-specific AI models over general-purpose ones when possible
- Avoid generating multiple versions of the same content unnecessarily

Use Efficiently

- Write clear, specific prompts to get better results in fewer attempts
- Batch similar AI tasks together rather than making frequent individual requests
- Turn off or close AI applications when not actively using them

Select Responsible Providers

- Choose AI services from companies committed to renewable energy
- Look for providers that publish their environmental impact data
- Support platforms that prioritise energy efficiency in their design

Reduce, Reuse, Recycle

- Save and reuse AI outputs instead of regenerating similar content
- Share AI-generated resources with others to maximise their utility
- Delete unnecessary files and clear caches regularly

Stay Informed

- Learn about the environmental impact of your most used AI tools
- Follow updates on more efficient AI alternatives as they become available
- Consider the carbon cost when deciding between AI and traditional solutions

We consider that vets should treat AI like any other resource-intensive tool, use it thoughtfully, efficiently, and only when it provides genuine benefit.

Key Considerations for Assessing AI Tools in Veterinary Medicine

When the decision to embed AI into an organisation lies with the vet, the technology must be comprehensively risk assessed before proceeding. Some questions vets should ask the software company to help in this regard include:

Purpose and Relevance of the Tool

- What problem does this tool solve?
- Is the tool designed to solve this problem specifically?
- Is AI the best technology to solve this problem?
- What benefits does AI bring to the product?
- What are the limitations of the tool?
- How will it be implemented?
- Is it possible to pilot the use of this software in my workspace?

Development, Transparency, and Validation

- How does this tool work?
- How was this tool developed?
- Were veterinary professionals involved in the relevant stages of development?
- Are there any third-party AI products in the software?
- Transparency about model function, performance, and explanation of limitations
- What data was used to train this tool? Is this representative for the proposed use case?

- What evidence is there that the model has been tested for bias across different patient demographics?
- What methods have been used to mitigate bias or prevent the model from perpetuating existing biases?
- Have validation studies been undertaken, and are they published?

Data Protection and Privacy

- Is it GDPR compliant?
- What happens to the data provided when using the product?
- How is Personally Identifiable Information (PII) handled by the product?
- How is inputted data used to train the model?
- What steps are taken to mitigate cyber attacks?

Safety, Oversight, and Accountability

- What safeguards are in place for its use?
- What degree of human oversight exists in the AI decision-making process?
- Are there specific safeguards for human override of automated AI decisions?
- What processes are in place for addressing and correcting any harmful outcomes produced by the model?
- Is there the possibility to opt out of or turn off certain AI enhancements?

Usability and Communication

- Are the outputs explainable to team members and clients?
- Is training provided to ensure all users understand the uses and limitations of the outputs?

Conclusion

Artificial Intelligence is already making a significant impact on the veterinary profession whether directly through clinical practice, education, research, epidemiology, government, admin and practice management, or indirectly through client use of technologies and its emerging role in our day-to-day lives. As we have described, the potential benefits for the profession and the animals under our care are significant but so are the challenges. Concerns about the increasing power of AI and what it means for the role of a vet are legitimate, but BVA believes that as a profession we must have an open and agile approach when it comes to appraising and adopting AI to ensure these technologies are delivering for people and animals. AI is here; an informed understanding of these technologies is vital to enable their safe development and deployment. This document sets out some key principles which we think vets should adopt in their use of AI across the profession with an appreciation for the potential benefits and risks of AI technologies. These are grounded in the ethical and regulatory implications of AI adoption to demonstrate the potential for improved safe delivery of care to animals and clients. This is tempered with the very real need to have vets involved in the process as early and as frequently as possible so the profession can lead from the front when applying these emerging technologies, to ensure we continue to deliver on our number one priority of supporting the highest levels of animal health and welfare.

Recommendations

Recommendation 1: All veterinary professionals should actively engage with understanding AI and follow these principles when considering the use of AI in their work.

Recommendation 2: Resources should be developed to assist vets in gaining an understanding of how AI tools work and how they can be evaluated.

Recommendation 3: Developers of veterinary and animal welfare tools should provide accessible and explainable information to vets about how tools are developed and validated.

Recommendation 4: Vet teams should openly discuss the use of AI in their workplace, and collectively agree how to integrate both practice and client-facing AI tools into decision making to help ensure technologies are used appropriately.

Recommendation 5: Technologies must be suitably risk-assessed before being introduced to veterinary workplaces.

Recommendation 6: All veterinary workplaces should have an AI use policy in place that addresses the above ethical concerns in a way that inspires transparent, confident use, and ability to discuss AI technologies with team members and clients. This policy should also include tools to monitor the impact of AI use in practice.

Recommendation 7: International standards for explainability and governance should be developed for veterinary AI tools.

Recommendation 8: UK veterinary regulators (RCVS & VMD) must take responsibility for the active regulation of veterinary AI tools deployed in the UK

ANNEX A – Key definitions

- **Bias:** The disproportionate weighting in favour of, or against a specific item or individual. AI algorithms are often trained on historical data which can contain bias that exists in society and are trained by humans who themselves have bias. Unless the algorithms are built with fairness in mind, they may repeat these biases in their predictions.[12]
    - **Data-level bias** occurs when biases present in the training and fine-tuning data sets of artificial intelligence models adversely affect model behaviour.[13]
    - **Algorithmic bias** occurs when systematic errors in machine learning algorithms produce unfair or discriminatory outcomes. It often reflects or reinforces existing socioeconomic, racial and gender biases.[14]

- **Deep learning:** An approach to building models using neural networks with more than one 'hidden' layer of artificial neurons. This is a common approach when working with image and text data. Deep learning models are able to capture complex relationships but can be difficult to interpret what data leads to a particular outcome.[15]
    - Accessible definition: Deep learning uses layered AI “neurons” to find patterns in data like images or text, but it can be hard to see how it makes decisions.

- **Explainability:** AI can be built on complex algorithms and data, and explainability is a measure of how understandable, or explainable, the decisions of an AI system are to humans.[16]

- **General AI:** A theoretical concept of AI that is designed to generalise, or adapt, to different applications, much like a human or animal would do.[17]

- **Generative AI:** deep-learning models that can generate text, images, and other content based on the data they were trained on.[18]

- **Large Language Models:** A large language model is a neural network that is trained on a vast amount of text. The training uses unlabelled text and some form of self-supervised learning. Usually, LLMs will have billions of parameters.[19]
    - Accessible definition: A large language model is an AI trained on lots of text that can understand and generate language.

- **Machine Learning:** An approach to building models using (normally large amounts of) data. This differs from traditional approaches to building models by defining rules by hand.[20] The model learns patterns and relationships based on the dataset which it can then apply to make predictions about new, unseen data.
    - Accessible definition: Machine learning is when a computer learns from data to make predictions, instead of being told exactly what to do.

- **Narrow AI:** AI focussed on solving a specific problem.[21]

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ANNEX B – Use Cases

Clinical settings

Diagnostic imaging

- AI has demonstrated uses in conventional veterinary radiology including orthopaedics, thorax examination, cardiac silhouettes, and image quality analysis. It also has demonstrated uses such as distinction between different types of brain diseases, prediction of the grading of certain intracranial diseases, detection of spinal cord diseases, and improvement of MR image quality[22].

Pathology and cytology

- Image recognition models identify abnormal cells or infections on slides, with demonstrated and emerging uses in liver fibrosis assessment[23], canine and feline lymphoma diagnosis[24], feline chronic enteropathy[25], sheep faecal egg counts[26], and bovine mastitis detection.[27]

Decision Support

- Systems that combine patient history, symptoms, and lab results can suggest possible diagnoses or treatment options based on symptoms and history[28] [29] [30]. Generating 3D models of anatomy for surgical planning.

Monitoring and early warning

- Wearable sensors and cameras use AI to spot early signs of lameness, pain, distress, or disease in livestock[31] and companion animals[32].

Automated notetaking and record management

- Speech-to-text and summarisation tools generate clinical notes or update patient records. Draft SOAP notes from structured inputs.

Admin and Practice Management

Scheduling and workflow optimisation

- Machine learning systems can predict busy periods, streamline appointment bookings, and allocate staff time efficiently.

Client communication

- Chatbots or large language models provide routine information to owners, such as vaccination reminders or post-surgery care guidance. These systems can also be used to answer common questions as an initial first port of call. They can also explain complicated veterinary concepts in simple to understand language.

Inventory and financial management

- AI can monitor stock needs, tracks medicine use, and identifies cost-saving opportunities.

Recruitment

- Role and people matching tools, and/or tools that automatically assess candidates for shortlisting.

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[23] Yuval Ramot, Ameya Deshpande, Virginia Morello, Paolo Michieli, Tehila Shlomov, and Abraham Nyska, "Microscope-Based Automated Quantification of Liver Fibrosis in Mice Using a Deep Learning Algorithm," *Toxicologic Pathology* 49, no. 5 (2021): 1126-1133. https://doi.org/10.1177/01926233211003866

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[31] Wageningen University & Research, "Detecting Disease with Computer Vision," *WUR*, https://www.wur.nl/en/article/detecting-disease-with-computer-vision.htm

[32] Muhammad Furqan Arshad et al., "Artificial Intelligence and Companion Animals: Perspectives on Digital Healthcare for Dogs, Cats, and Pets," *Research in Veterinary Science* 193 (2025): 105776. https://doi.org/10.1016/j.rvsc.2025.105776

Supporting team wellbeing

- AI coaches and therapists, generating wellbeing resources, with clear links back to human-run vet charities/mental health hubs.

Education

Interactive case simulations

- Generative AI creates realistic clinical scenarios for students to practise diagnosis and treatment planning. Simulations can also be used to safely test practical skills before moving to the real thing. AI can be used in communication simulations by text or voice where students can work on their consult skills.

Personalised learning support

- Adaptive learning platforms adjust training content to match a student's progress and knowledge gaps. It can also be used to summarise research papers in a format suited to the student. Materials can be quickly and efficiently translated into different languages.

Virtual tutors and question assistants

- AI tools answer student questions or explain complex concepts in simpler terms. Chatbots that are trained on veterinary research and concepts can be available 24/7 to provide advice and assistance.

Automated assessment

- Systems that evaluate written answers or practical reasoning to support consistent grading. If the assumption is made that AI will be used by students to assist, then this could be incorporated into the assessment itself so pupils can apply AI effectively but also still be tested on the core skills.

Research and Epidemiology

Disease surveillance and modelling

- AI systems can integrate and analyse data from farms, diagnostic labs, veterinary practices, and wildlife monitoring programmes to detect unusual patterns that may signal emerging disease threats. Machine learning models can track spikes in clinical signs or lab test results across regions and predict potential outbreaks. These tools can also model transmission dynamics under different scenarios, helping inform biosecurity, vaccination, and containment strategies.

Genomic and molecular research

- Machine learning is increasingly used in veterinary genomics to identify genetic markers associated with disease susceptibility, drug resistance, or desirable breeding traits. By analysing vast genomic datasets, AI can help researchers pinpoint subtle mutations or gene expression patterns that would be difficult to detect manually.

Data mining and literature review

- Large language models can process and synthesise veterinary and biomedical research. These tools can automatically extract key findings, identify relationships between studies, and flag emerging topics across journals and database enabling faster evidence-based decision making.

Animal testing

- The advent of AI systems improving ability to mimic animal models already enables reduced reliance on testing on animals.[33] The ongoing improvement of these models will allow researchers to further refine and reduce reliance on live animals in testing.

Drug discovery

- Machine learning algorithms can model drug target interactions, forecast toxicity profiles, and prioritise candidates for laboratory testing. This potentially reduces the time and cost of developing new veterinary medicines and can optimise drug formulation and dosage design for different species.

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