VETERINARY INNOVATION COUNCIL
POWERED BY THE NAVC

What Do Veterinary Professionals Need to Know about Artificial Intelligence in 2025?

A Veterinary Innovation Council Guidance Document

Introduction

Artificial intelligence (AI) in veterinary medicine promises faster documentation, enhanced clinical decision-making, and improved patient care. Tools that transcribe clinical records, integrate with electronic medical records, or interpret radiographs offer efficiency and new insights. Yet, current AI-driven solutions often fall short of their claims, pose questions about accuracy and privacy, and may not adhere to best practices. As these technologies evolve—expanding to advanced imaging modalities, predictive analytics, and deeper data integration—veterinarians must remain cautious. Carefully evaluating accuracy, cost, data security, and ethical implications is essential to ensure that AI complements, rather than compromises, professional judgment.

What Do Veterinary Professionals Need to Know about Radiology AI in 2025?

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Abstract
Artificial intelligence (AI) is transforming veterinary radiology with tools marketed as faster, cost-effective solutions for image interpretation. While promising to streamline workflows, these technologies often fall short of claims due to limited validation and hidden costs. Most available AI tools lack compliance with Good Machine Learning Practices and transparency standards, raising concerns about accuracy, cost-effectiveness, and liability. To ensure safe implementation, veterinarians must critically evaluate AI tools, scrutinizing their validation methods, dataset biases, integration costs, and privacy compliance. Continuous education is essential to navigate AI's capabilities and limitations. Future advancements, including radiomics, predictive analytics, and expanded imaging modalities, will broaden AI's scope, emphasizing the need for human oversight to ensure patient safety. This evolving landscape highlights the importance of balancing innovation with evidence-based evaluation to enhance clinical outcomes responsibly.

Current Scope: Claims vs. Reality

Capabilities Available

Artificial intelligence (AI) tools for radiograph interpretation are now commercially available, marketed as faster and cost-effective alternatives to traditional diagnostic approaches. These computer-aided diagnostic (CAD) systems are designed to streamline image interpretation.[1] While these innovations have the potential to enhance clinical workflows, their practical utility and limitations must be carefully evaluated.

Claims vs. Facts
The claims made by AI developers often emphasize accuracy, speed, and cost-efficiency. However, most AI products have no scientific evaluation, and independent evaluations that have occurred reveal discrepancies between promotional claims and real-world performance.[1]

Accuracy: Accuracy is only a single metric for evaluating AI systems and can be artifactually enhanced depending on the methodology of testing.[2] Notably, no current commercial veterinary products fully align with the principles of Good Machine Learning Practice (GMLP)[3] or Transparency for Machine Learning in Medical Devices (MLMD)[4] as defined by the Food and Drug Administration (FDA), Health Canada and UK Medicines & Healthcare products Regulatory Agency (MHRA).

Cost: While AI tools may initially appear cost-effective, hidden expenses often arise. Practices or clients may incur additional costs for confirmatory diagnostics or follow-up studies due to incomplete or inaccurate AI interpretations. Moreover, the absence of human expertise, especially in life-threatening cases, could lead to misdiagnoses and poor outcomes.

Evaluating Current AI Tools

Key Considerations
Before adopting an AI tool, veterinarians should assess its accuracy, cost-effectiveness, and anticipated post-implementation performance.[2]
Accuracy: Robust validation studies across the species, breeds, and case types for which a company indicates that their AI tool could be utilized. A tool's performance in both internal and external validation settings must be scrutinized.
Cost vs. Benefit: Practices should analyze the return on investment, weighing potential efficiency gains against diagnostic accuracy and potential additional expenses.
Post-Implementation Monitoring: Regular audits are essential to ensure AI systems meet predefined performance goals and adapt to evolving clinical needs.

Questions to Ask
When evaluating AI tools, veterinarians should ask:
1. What specific problems does the AI aim to address?
2. Who was involved in the creation of the model, and do they have relevant expertise?
3. What training methods were used, and how was the AI validated?
4. Does the tool disclose potential biases in its dataset or methodology?

5. What are the initial and ongoing maintenance costs?
6. How will ongoing performance be monitored in practice?
7. Are there provisions for error management and data security and does this open my practice to external cybersecurity vulnerability?
8. Does the system integrate with my practice's existing workflow and what implementation cost is involved?
9. How frequently is the tool updated to reflect changes in clinical guidelines, recent/relevant research, or emerging diseases?
10. What happens to patient data after use – is it stored, shared, archived, or deleted? If stored, who has access?
11. Does the software comply with privacy and data security regulations in the jurisdiction where it is used?
12. Does this integrate in my clinic's workflow (PIMS, communications solutions etc) or are there integration costs involved?
13. Malpractice Implications: Understand liability issues if the AI tool provides incorrect recommendations.

Patient Safety Considerations

Veterinarians must also examine safeguards to prevent misdiagnoses. For example:

- Does the tool account for species, breed, and age-specific variations in radiographic appearance?
- Are there protocols for human review of AI interpretations in critical cases or in rare findings for which the tool did not receive training?

Ongoing Education

Veterinarians must engage in continuous education to understand AI's capabilities, limitations, and evolving trends. Training programs and professional resources can help practitioners integrate AI effectively while maintaining high standards of patient care.

Future Directions

Advanced AI Models

Future AI systems are poised to extend their capabilities beyond radiographs, encompassing modalities such as computed tomography (CT), magnetic resonance imaging (MRI), and ultrasound. These advancements will enable comprehensive diagnostic workflows powered by AI, with applications spanning small animal, equine, and exotic species.[5–7]

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Predictive Capabilities

AI's evolution will likely include predictive analytics, integrating imaging data with clinical records to forecast disease progression and patient outcomes. Such insights could improve decision-making in complex cases and support proactive treatment planning.

Radiomics

Radiomics, the extraction of quantitative features from imaging data, represents another frontier. Future systems may incorporate radiomics into holistic patient analyses, enabling imaging-based predictions of prognosis and therapeutic responses. These tools could also integrate with communication platforms, ensuring timely updates to animal owners for cases requiring immediate attention.[8]

Different End Users

While the current manifestations of AI in veterinary diagnostic imaging support computer aided diagnosis to primary practitioners, the future may include AI directed at radiologists who can best support improved patient outcomes through their imaging expertise.[9]

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What Do Veterinary Professionals Need to Know about AI Scribing Tools in 2025?

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Abstract

As the veterinary profession increasingly explores the use of AI-driven transcription and scribing tools, clinicians face a range of potential benefits and challenges related to clinical documentation. These technologies—capable of capturing veterinary-specific terminology through advanced voice recognition and seamlessly assisting with record entry—promise improved efficiency, accuracy, and workflow integration. While this article does not address AI applications in integrated diagnostics, AI- differential diagnoses, and client education, it focuses instead on how transcription and scribing tools can streamline routine documentation tasks.

This article offers a viewpoint on the key factors veterinarians should weigh when evaluating AI-based scribing systems, including accuracy, data security, integration with existing EMRs, workflow efficiency, and the dangers of overinterpretation. Veterinary professionals must remain vigilant in monitoring automation bias and ensure that the veterinarian, not the algorithm, ultimately governs the medical record's content. Additionally, compliance with local regulations concerning client privacy and medical record retention is critical, as is transparency with clients about the use of recording technologies.

By examining both current and forthcoming capabilities—such as AI-driven transcription specifically trained on veterinary language and integration with diagnostic modalities—this viewpoint encourages cautious optimism and proactive due diligence. With appropriate oversight, these innovations may help veterinary professionals reduce documentation burdens, support decision-making, and improve patient care.

What do Veterinary Professionals Need to Know about AI Scribing Tools in 2025?

Introduction

Rapidly evolving artificial intelligence (AI)–driven documentation tools are reshaping how veterinary practitioners record, manage, and utilize clinical data. Veterinary clinicians have long struggled with the administrative burden of writing and maintaining thorough patient records. The promise of AI-based scribing solutions lies in their ability to translate spoken words into highly accurate, structured text while incorporating templated notes, auto-complete features, and even clinical decision support functionalities.

What Is Currently Available?

At present, veterinary professionals have access to a range of AI-driven transcription and scribing tools. These include basic transcription (i.e. speech-to-text) applications adapted for veterinary terminology, as well as ambient voice recognition (i.e. full appointment scribing) software that can structure examination findings according to standardized SOAP (Subjective, Objective, Assessment, Plan) notes and integrate seamlessly with electronic medical record (EMR) systems. Such tools can streamline documentation, reduce repetitive tasks, and enhance efficiency.

Some commercially available products also bundle additional functions—such as automated differential diagnoses, client education modules, staff wellness metrics, and direct links to education resources. While these broader capabilities highlight the multifaceted potential of AI, they extend beyond the scribing and transcription focus of this article. These more complex applications warrant their own dedicated analysis, as they are constantly evolving and cannot be solely relied upon for diagnostic accuracy. For now, we concentrate on the readily available transcription and scribing features, which are more stable, immediate solutions for improving veterinary documentation.

What Is on the Horizon?

Looking ahead, we can anticipate more advanced AI transcription systems tailored specifically to the language and clinical nomenclature of veterinary medicine, thereby improving accuracy and reducing the need for extensive manual editing. Real-time transcription and summarization tools could streamline the documentation of consultations, enabling clinicians to dedicate more attention to patient care. While certain forthcoming solutions may also incorporate features that automatically integrate lab results, imaging data, or telemedicine findings directly into a patient's record, it is important to note that these represent functionalities beyond basic scribing and transcription. Such expanded capabilities are part of a broader toolset and will require separate, more comprehensive analysis.

Evaluating Scribing Tools

Despite these anticipated advances, careful scrutiny is essential. When considering the implementation of AI-driven documentation tools, veterinary professionals should evaluate several key factors:

1. **Accuracy with Veterinary Terminology:** Veterinary-specific jargon and complex clinical language can challenge AI transcription. Before widespread adoption, clinicians should test new systems to gauge how accurately they capture species- and condition-specific terms, as well as pharmacologic nomenclature.
2. **Integration Capabilities:** Traditionally, AI scribing tools in veterinary medicine required integration with existing Electronic Medical Record EMR and practice management systems to streamline workflows and reduce manual data entry. However, the emergence of advanced, standalone AI solutions—such as those utilizing large language models (LLMs), Retrieval-Augmented Generation (RAG), and computer vision— will eliminate this necessity in a very short time horizon. These technologies enable intelligent data extraction from various sources, including carrier portals and physical documents, without needing direct access to EMR systems. This approach enhances efficiency by reducing manual data entry and minimizing errors, all without the complexities of system integration.
3. **Data Security and Privacy:** While the Health Insurance Portability and Accountability Act (HIPAA) does not apply to veterinary practices, safeguarding client and patient information remains essential. Veterinarians must comply with state-specific data protection laws and adhere to professional guidelines that mandate the confidentiality of medical records; most states do protect the confidentiality of veterinary patient records. Implementing robust data security measures—such as data encryption, access controls, regular security audits, and comprehensive staff training—is crucial to prevent unauthorized access and to maintain client trust. If using AI scribing technology, veterinarians must ask the provider to ensure they are following these data security measures.
4. **Ease of Use:** The ideal tool should reduce workloads, not add complexity. Veterinarians and support staff require intuitive interfaces and minimal training time.
5. **Cost-Benefit Analysis:** While some AI solutions promise efficiency gains, veterinary professionals must scrutinize the financial outlay. Initial costs, subscription fees, and maintenance expenses should be weighed against expected increases in productivity and accuracy.

6. **Vendor Support and Reputation:** Evaluate the provider's track record in the veterinary domain, not just success in the human medical domain. Well-established vendors that offer responsive customer support, veterinary focus, and regular software updates are generally more reliable partners.
7. **Scalability, Future-Proofing, and Domain Expertise:** Since technology is ever evolving, it is important to choose solutions from teams with proven experience in both veterinary medicine and AI. Vendors who have veterinarians on staff and have deep AI expertise—not just wrappers for ChatGPT (an application that merely provides an interface for interaction) —are best positioned to deliver scalable tools that stay relevant through continuous advancements.

Mitigating Risks: Automation Bias and Overinterpretation

While AI-based documentation tools can streamline recordkeeping, they also introduce new risks. Automation bias—overreliance on AI-generated content while ignoring contradictory information—can occur when clinicians accept such output without thorough verification. Overinterpretation is another concern, in which the AI suggests diagnoses, conclusions, or recommendations not supported by clinical data, that can lead to misinterpretations. More on the topic of overinterpretation here.

For this reason, we have chosen to address AI-generated differential diagnoses separately from tasks like transcription or scribing. This separation does not imply that reviewing AI-generated differentials is inherently problematic; rather, it acknowledges that these processes (Scribing and Differentials) are fundamentally different from a technological standpoint. Ultimately, when reviewing a medical record, the veterinarian remains the final authority, responsible for validating and authorizing all entries, not the AI tool.

Compliance Considerations

Beyond the technical and clinical considerations, veterinarians must address the compliance of recording and storing client interactions. If consultations are recorded as part of the transcription process, these recordings may be considered part of the medical record and thus be subject to retention and confidentiality requirements. Regulatory boards can provide guidance on record retention policies. Additionally, clients should be informed that their consultations may be recorded for documentation purposes and should have the option to decline this practice.

A Balanced Approach to Adoption

Ultimately, AI-driven scribing tools hold the potential to transform clinical documentation in veterinary medicine. They offer improved accuracy and time savings, freeing veterinarians to concentrate on patient care and client communication. Nevertheless, cautious adoption is advised. Rigorous evaluation, transparency with clients, and close oversight of the final medical record are essential.

With a balanced approach, the veterinary profession can harness these tools to alleviate administrative burdens, foster improved clinical decision-making, and possibly enhance patient outcomes. As these technologies mature, veterinarians who remain informed and engaged in evaluating AI solutions will be best positioned to reap their benefits while safeguarding patient care and professional integrity.

Questions To Ask the Provider

To help make this overview practical for every practitioner, we have put together a list of questions we recommend asking any service provider in this space.

Team Composition and Expertise:

- *"Who are the key members of your development team, and what is their background in both veterinary medicine and artificial intelligence?"*
    - There should be a red flag if no one on the development team is a veterinarian, these applications require development of deep medical logic which means a veterinarian is essential
    - There should be a red flag if they have no developers with a graduate level (Masters/PhD) in Artificial Intelligence, the field of AI is a very deep technical field and it is rarely learned 'on the job' rather it is typically learned through traditional university channels
- *"Do you have board-certified veterinarians on your team who actively guide product development and updates?"*
- *"Can you detail the AI expertise of your engineers and data scientists? For example, have they previously worked on medical or veterinary language models?"*

- *"How do you ensure ongoing collaboration between your veterinary experts and AI specialists to continually refine and validate the tool's accuracy and relevance?"*
    - If the AI or Veterinary members of the team are only 'part-time' or 'board-members' or 'advisors' this would be concerning

Accuracy and Terminology:

- *"How do you ensure the AI accurately interprets specialized veterinary terms, species names, and pharmacologic nomenclature?"*
- *"If you use Foundational Models like ChatGPT, which have not yet been proven to be reliable enough in a medical setting, how do you go above and beyond these to ensure medical accuracy?"*
    - ChatGPT alone is not accurate enough to handle most Scribing based applications, this is subject to change as foundational models (i.e. ChatGPT, Anthropic) improve

Integration with Existing Systems:

- *"Does your solution integrate seamlessly with our current EMR, or will it require additional workflow steps?"*
- *"If your integration is a chrome widget or true API integration?"*
    - As noted, newer AI based integrations will be coming out soon making older integration methods obsolete, but currently it is still important to understand if the service provider is deeply integrated with the system or just using a Chrome Widget to mimic an integration

Data Security and Privacy:

- *"What measures do you take to protect client and patient data, and how do you handle ownership and deletion of recorded consultations?"*
    - You want to ensure the service provider is using encryption

Ease of Use and Training:

- *"What training do you provide to our staff, and how quickly can they become proficient with the system?"*

Vendor Experience and Support:

- *"Can you provide references from other veterinary practices, and how responsive is your support team if we encounter issues?"*

Costs and Value:

- *"What is your pricing model, and can you provide examples of practices that have seen a clear return on investment?"*

Risk Mitigation:

- *"What safeguards do you have to prevent automation bias and overinterpretation, ensuring veterinarians remain the ultimate decision-makers?"*
    - If the service provider offers "AI-generated differential diagnosis" it is essential to make sure this is not a default option which is overriding what your staff is doing or saying. Additionally it is important, for the service provider to clearly identify differentials that have been 'scribed' versus 'generated'

Compliance and Transparency:

- *"How do you help ensure compliance with state regulations, and how do we inform clients about recorded consultations and their data usage?"*

Scalability and Future-Readiness:

- *"What is your roadmap for future enhancements, and how do you plan to stay current with advances in AI and veterinary medicine?"*
    - You want a team that is not just relying on advancements from ChatGPT or other Foundational Models, but rather an AI team that is actually developing AI for Veterinary Medicine

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Conclusion

The potential for AI to transform veterinary workflows is clear, but its adoption requires diligence. AI-driven scribing and imaging tools should be thoroughly vetted, regularly validated, and transparently developed. Veterinarians must stay informed, question unsupported claims, and preserve their authoritative role in patient care. By approaching AI thoughtfully—balancing innovation with responsibility—the profession can leverage these tools to enhance efficiency, improve outcomes, and maintain the trust and integrity at the heart of veterinary medicine.

About the Veterinary Innovation Council

The Veterinary Innovation Council (VIC) is a 501(c)(6) nonprofit organization dedicated to framing the future of veterinary medicine through innovation, education, and advocacy. Formed in 2015 by the North American Veterinary Community (NAVC) and guided by a Board of forward-thinking veterinarians and industry leaders, VIC is uniquely positioned to help navigate the opportunities and lead the transformations of modern veterinary medicine.