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High Importance, Low Preparedness: A Gap in Veterinary Anesthetic Knowledge

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Background

- Veterinary anesthetics (ultrapotent opioids, alpha-2 agonists, high-dose ketamine) are rarely seen in human medicine
- Exposures can be fatal; xylazine toxicity mimics opioid overdose but does not respond to naloxone
- No FDA-approved reversal agent exists for alpha-2 toxicity
- Chronic exposure complicates perioperative care
- Objective: assess anesthesiologists' knowledge of veterinary anesthetic pharmacology, recognition, and management

Methods

- IRB-exempt, anonymous, voluntary electronic survey of ASRA members (24 questions, ~20 min)
- Demographics + 15-question knowledge assessment across 4 domains: pharmacology/mechanisms, recognition/presentation, perioperative considerations, management/treatment
- 2 Likert items (1–5): perceived importance and self-rated preparedness

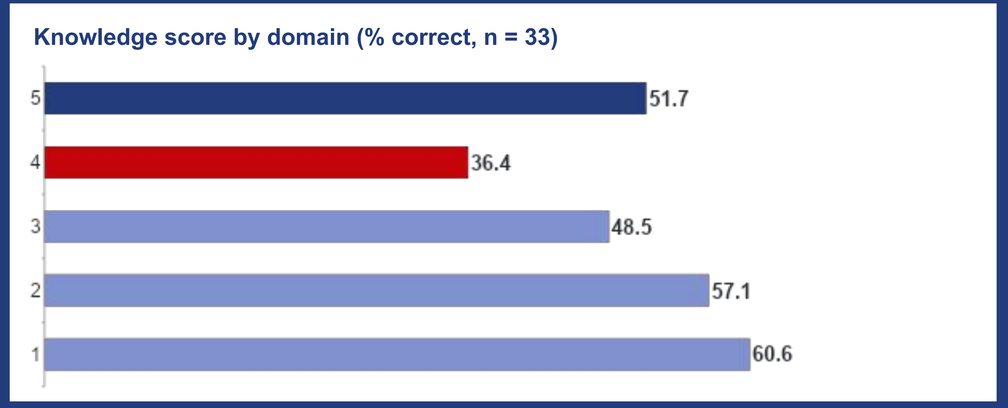
Anesthesiologists say veterinary anesthetic knowledge matters, but most feel unprepared.

On a 15-question knowledge test, respondents answered about half correctly.

51.7%
mean knowledge score across all domains

3.47/5
perceived importance of veterinary anesthetic knowledge

1.64/5
self-rated preparedness (68% rated lowest level)



Results

- 46 responses (33 complete); 82% attending anesthesiologists; 37% with 21+ years' experience
- Only 7% had formal training; only 10% had cared for a suspected case
- Lowest domain: pharmacology/mechanisms (36.4%); complex management scenarios as low as 33.3%

Discussion / Conclusion

- Significant knowledge gaps, most pronounced in foundational pharmacology and complex management scenarios
- Near-absence of formal training likely drives both the gaps and the importance–preparedness disconnect
- Limitation: voluntary responses from a subset of ASRA membership
- Targeted education is needed to improve perioperative recognition, preparedness, and patient safety