

Dying well:
Is there scope to
improve the welfare of
companion dogs and
cats during euthanasia
appointments?

RSPCA Animal Welfare Seminar 2024

Presented by: Anne Quain

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Spoiler alert: Yes!

Article

Euthanasia of Dogs by Australian Veterinarians: A Survey of Current Practices

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Simple Summary: Veterinarians are commonly required to euthanise dogs in the course of their work. The way euthanasia is performed can impact the welfare of dogs, the wellbeing of the client, and the wellbeing of the veterinary team members involved. There are published guidelines regarding humane euthanasia techniques, but there are few reports on how veterinarians actually perform euthanasia, in both non-emergency and emergency contexts. We surveyed Australian veterinarians on the techniques they used, including whether they used premedication or sedation prior to euthanasia of dogs. We found that almost all veterinarians used barbiturates to euthanise dogs. The majority provided some form of premedication or sedation prior to euthanasia in non-emergency contexts, compared with just under half in emergency situations. The type of premedication or sedation varied. Factors associated with administering a premedication or sedation included the gender of the veterinarian, their location and the type of practice they worked in. Veterinarians had differing practices and views about the way in which canine euthanasia should be performed. These findings will be useful to allow individual veterinarians to benchmark and improve their own euthanasia practices and may assist in the development and refinement of canine euthanasia protocols.

Abstract: Euthanasia techniques utilised by veterinarians impact the welfare of many dogs in their final moments. Despite euthanasia guidelines, little is known about euthanasia techniques used in practice. We administered an online survey of Australian veterinarians who had euthanised at least one dog in the previous 12 months. We found that 668 (96.8%) had euthanised a dog in the previous 12 months, almost all using intravenous pentobarbitone sodium ($n = 651$, 99.7%). For non-emergency euthanasia ($n = 653$), the majority ($n = 442$, 67.7%) administered a premedication or sedation prior to euthanasia versus less than half for emergency euthanasia ($n = 286$, 46.4%). Practices and views about euthanasia varied. Female veterinarians and veterinarians located in metropolitan regions were more likely to administer a premedication or sedation prior to non-emergency euthanasia ($p < 0.05$). Veterinarians in private mixed animal practices were less likely to administer a premedication or sedation prior to a non-emergency euthanasia ($p < 0.05$). For non-emergency and emergency euthanasia, veterinarians who worked in “other” practice types were more likely to administer a premedication or sedation than private companion animal practices ($p < 0.05$). The possible reasons for differences in euthanasia practices are explored, and scope for refinement is identified.



Keywords: euthanasia; veterinarian; companion animal; canine; dog; end-of-life; premedication; sedation; pentobarbitone; animal welfare

1. Introduction

In performing euthanasia, veterinarians seek to induce a “good death”—one that minimises the suffering, discomfort and distress of animals, with emphasis placed on effecting a painless, rapid and smooth loss of consciousness prior to death [1,2]. Indications for euthanasia or humane killing include preventing further deterioration of quality of life, relieving suffering or protecting the health and safety of animals and humans [1,3–5].

Article

Euthanasia of Cats by Australian Veterinarians: A Survey of Current Practices

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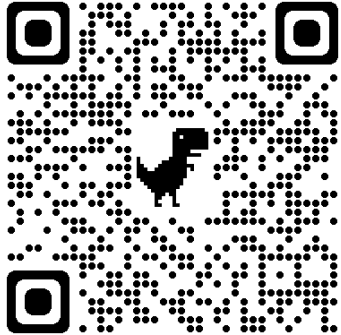
Simple Summary: Veterinarians are frequently called upon to euthanise cats. As the way in which euthanasia is performed can impact the welfare of cats, we sought to describe the contemporary feline euthanasia practices of Australian veterinarians. We also sought to determine factors associated with the administration of premedication or sedation prior to euthanasia. In an online survey of Australian veterinarians, 95.1% had euthanised at least one cat in the previous 12 months, of which 79.0% had performed euthanasia of a cat in the context of an emergency. Nearly all veterinarians euthanised cats using a barbiturate (99.8%). Premedication or sedation was administered in 71.0% and 52.4% of non-emergency euthanasia and emergency euthanasia, respectively. The most common agent used for premedication or sedation in non-emergency euthanasia was tiletamine-zolazepam, while the most common agents used in emergency euthanasia were opioids. Female veterinarians, those working in ‘other’ workplaces, and those in metropolitan locations were more likely to administer premedication or sedation prior to euthanasia. This study identified scope for refining euthanasia techniques to maximise the welfare of cats, their owners or guardians, and the veterinary team members caring for them.

Abstract: We sought to document the contemporary feline euthanasia practices among Australian veterinarians and determine the factors associated with the administration of a premedication or sedation prior to euthanasia. Australian veterinarians who had euthanised at least one cat during the previous 12 months were invited to participate in an anonymous online survey. From 615 valid responses, 585 respondents (95.1%) had euthanised at least one cat in the last 12 months, of which 462 respondents (75.1%) had performed an emergency euthanasia. Intravenous (IV) injection ($n = 536$, 91.6%) of pentobarbitone sodium ($n = 584$, 99.8%) was the predominant primary method. Premedication or sedation was administered to cats by 415/585 (71.0%) and 242/462 (52.4%) of respondents in non-emergency and emergency euthanasia, respectively. In a multivariable logistic regression analysis, for non-emergency euthanasia, being female and working in a metropolitan area were significant predictors for administering a premedication or sedation ($p < 0.001$ and $p = 0.037$, respectively). For emergency euthanasia, working in an ‘other’ type of practice was a significant predictor for administering a premedication or sedation ($p < 0.001$). Australian veterinarians vary in their approach to feline euthanasia. There is scope for refinement of euthanasia techniques to maximise the welfare of cats, their owners or guardians, and veterinary team members.

Keywords: euthanasia; veterinarian; companion animal; feline; cat; end-of-life; premedication; sedation; pentobarbitone; animal welfare

1. Introduction

The term ‘euthanasia’—derived from the Greek words ‘eu’ (‘good’) and ‘thanatos’ (‘death’)—describes a ‘good death’ [1]. In veterinary medicine, ‘euthanasia’ usually refers to ‘ending the life of an individual animal in a way that minimises or eliminates pain



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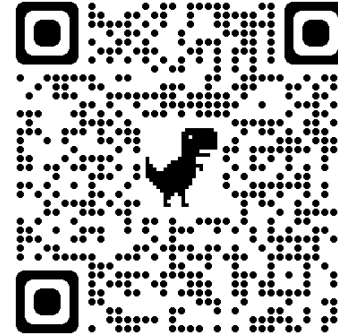
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Why do we
need to talk
about death?

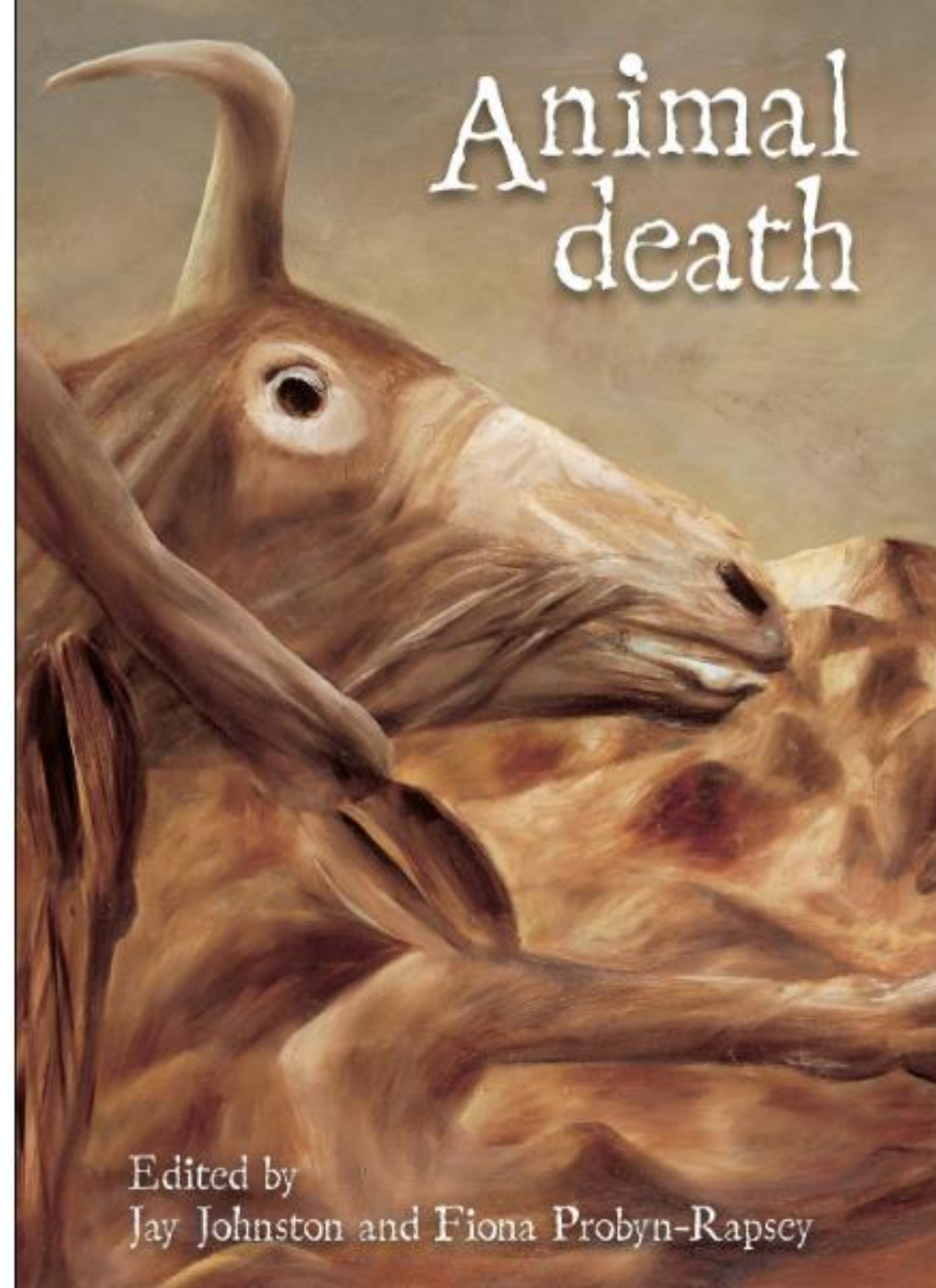


What is euthanasia?

“the veterinarian’s prima facie duty in carrying out euthanasia includes, but is not limited to,

- 1) their humane disposition to induce death in a manner that is in accord with an animal’s interest and/or because it is a matter of welfare, and
- 2) the use of humane techniques to induce the most rapid and painless and distress-free death possible.

These conditions, while separate, are not mutually exclusive and are codependent.” (AVMA, 2020)



A day one competency

14

Recognise when euthanasia is appropriate and perform it humanely and safely.

Euthanasia should be carried out using an appropriate method whilst showing sensitivity to the owners and others and with due regard to the safety of those present.

Confirmation of death should be performed.

Euthanasia technique training highly variable within and between Australian and NZ veterinary schools (Littlewood et al., 2018)

Training rated as unsatisfactory by veterinarians in NZ -29% received NO training in sedation protocols (Gates et al., 2023)

Day One
Competencies

Version 1: January 2024

AVBC

From “putting to sleep” to putting to sleep

CHAPTER 59

Euthanasia

Euthanasia is the production of quiet, painless death in an animal for humane reasons. Questions frequently arise as to the best method of performing euthanasia. Several methods are available. The choice of method should be determined by the species of animal, the wishes of the owner, and the conditions under which euthanasia is to be performed.

(Meyer Jones, 1954)

Aspirational statement vs reality...

Methods described in 1954 include...

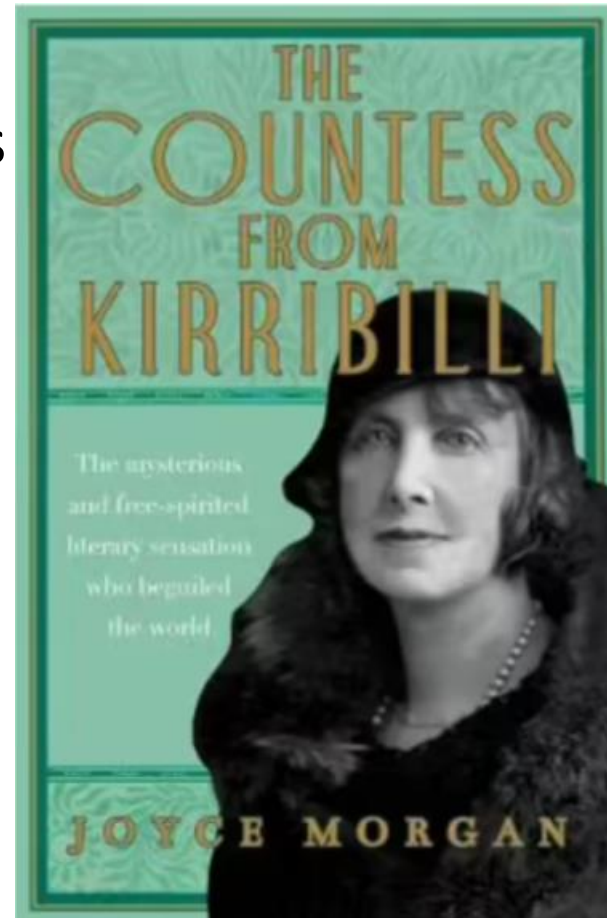
- Barbiturates
- Strychnine sulfate
- Hydrocyanic/Prussic acid
- Electrocutation
- Cutting posterior aorta
- Lethal chamber

1933:

“Woozie had become aggressive, and started attacking her other dogs, and developed severe eczema. She decided to have him put down. She took him to the vet, who promised a peaceful, painless demise. But the procedure was botched. Elizabeth watched in horror as the trembling, terrified dog struggled to the end. The image haunted her.

I ought to have snatched him up and brought him home. But I didn't know. I thought he would drop off to sleep in a minute. I hadn't an idea that brute [the vet] was going to dash at him with ether and hold it over his poor little sore nose [...]the very things I most loathe and shrink from I allowed to be done to my helpless little Woozie.

She felt sick and wretched long after she buried the little dog, wrapped in linen, in her garden and begged his forgiveness” (Morgan, 2021).



Potential for welfare compromise /suffering

- Fear, anxiety, distress – mental state of animal prior to unconsciousness
 - Arising from circumstances leading to euthanasia e.g. trauma, acute or chronic illness
 - Transport to veterinary facility if applicable
 - Unfamiliar environment/persons/animals, separation from caregivers/conspecifics
- Physical pain/discomfort/illness
 - associated with conditions (trauma, systemic disease, osteoarthritis etc),
 - associated with restraint for euthanasia, injection, extravasation of drugs
 - nausea, breathlessness/air hunger, dysphoria

Negative euthanasia experiences can impact *future* animal welfare in many ways...

- Client may delay presentation of future animals for euthanasia
- They may prefer a “natural” death of future animals (based on belief that this is associated with less suffering)
- Complicated grief may prevent subsequent adoption of animals – concerning esp given continued “surplus” of companion animals in Australia -28% of cats in pounds and shelters euthanased (Chua et al., 2023)
- May lead to role or career attrition of veterinary team members (Crane et al., 2023) – concerning in light of veterinary workforce shortages



LEGISLATIVE COUNCIL

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Inquiry into the veterinary workforce shortage in New South Wales



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of New South Wales

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NSW Government Inquiry into the Veterinary
Workforce Shortage



SMALL ANIMAL EUTHANASIA: UPDATES ON CLINICAL PRACTICE



EDITORS

BETH MARCHITELLI
TAMARA SHEARER

May 2020



Euthanasia technique today

- The majority of companion animals registered with veterinary practices are ultimately humanely euthanased
- Owner presence encouraged
- Increased recognition of “in home euthanasia” (IHE), palliative care, hospice
- Handling techniques to minimise fear, anxiety, distress
- Multi-modal analgesia (pain relief)
- Use of pre-visit pharmaceuticals where possible and appropriate
- Pre-euthanasia sedation, anaesthesia considered “best practice”

AVMA Guidelines for the Euthanasia of Animals: 2020 Edition*

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*The AVMA Panel on Euthanasia develops the content of the guidelines, with support from its working groups. The panel is required to do a comprehensive review and update of the report at least every 10 years, although more frequent major revisions are possible based on substantive information gleaned from new research and experience with practical implementation. To ensure the guidelines remain as up-to-date as possible, interim revisions (reflecting substantive updates, but of a less extensive nature than a major revision) are also accommodated.

Research questions

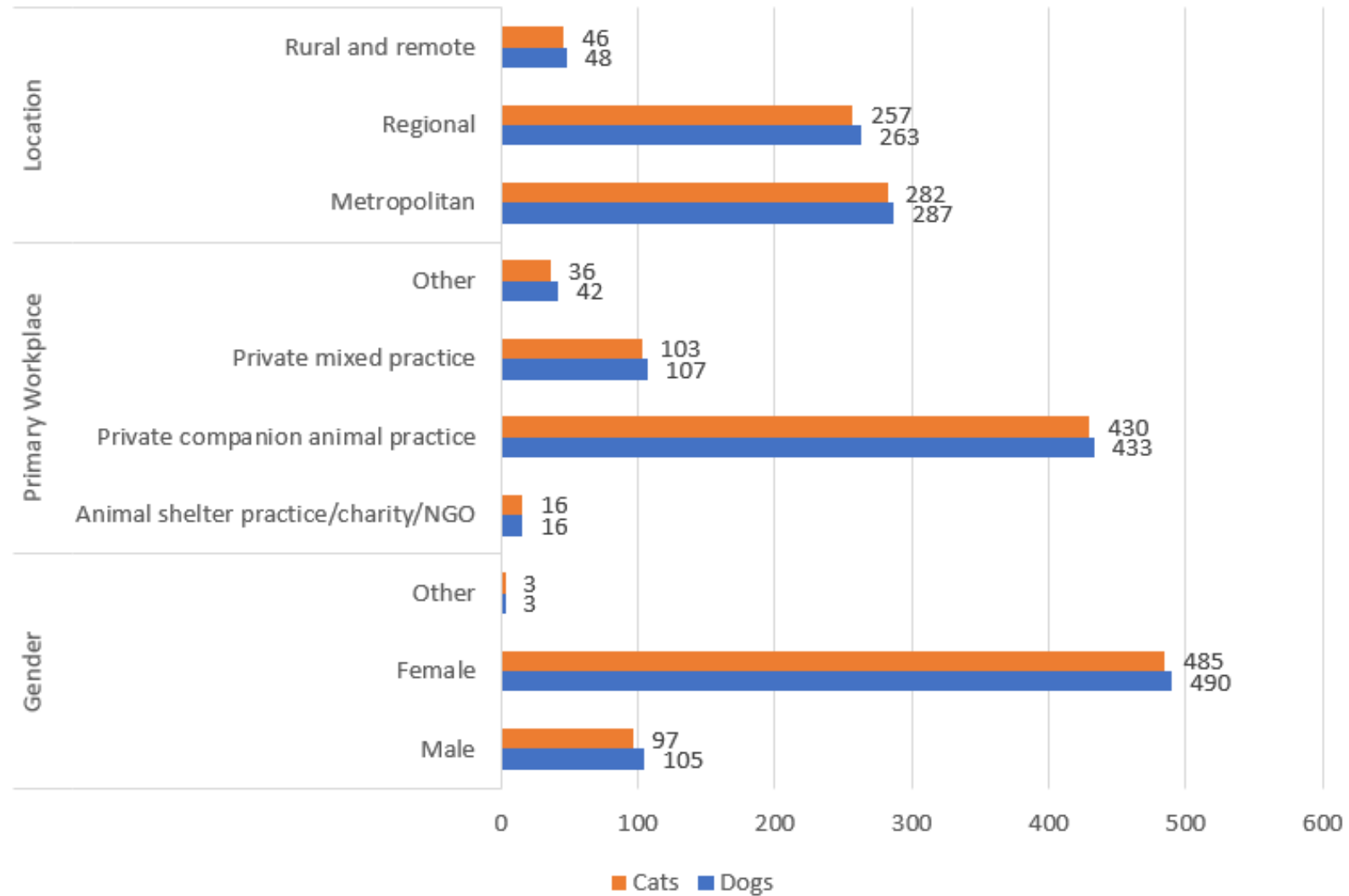
What methods do Australian veterinarians use when performing euthanasia (both non-emergency and emergency) on canine and feline patients?

How frequently is pre-medication or sedation used?

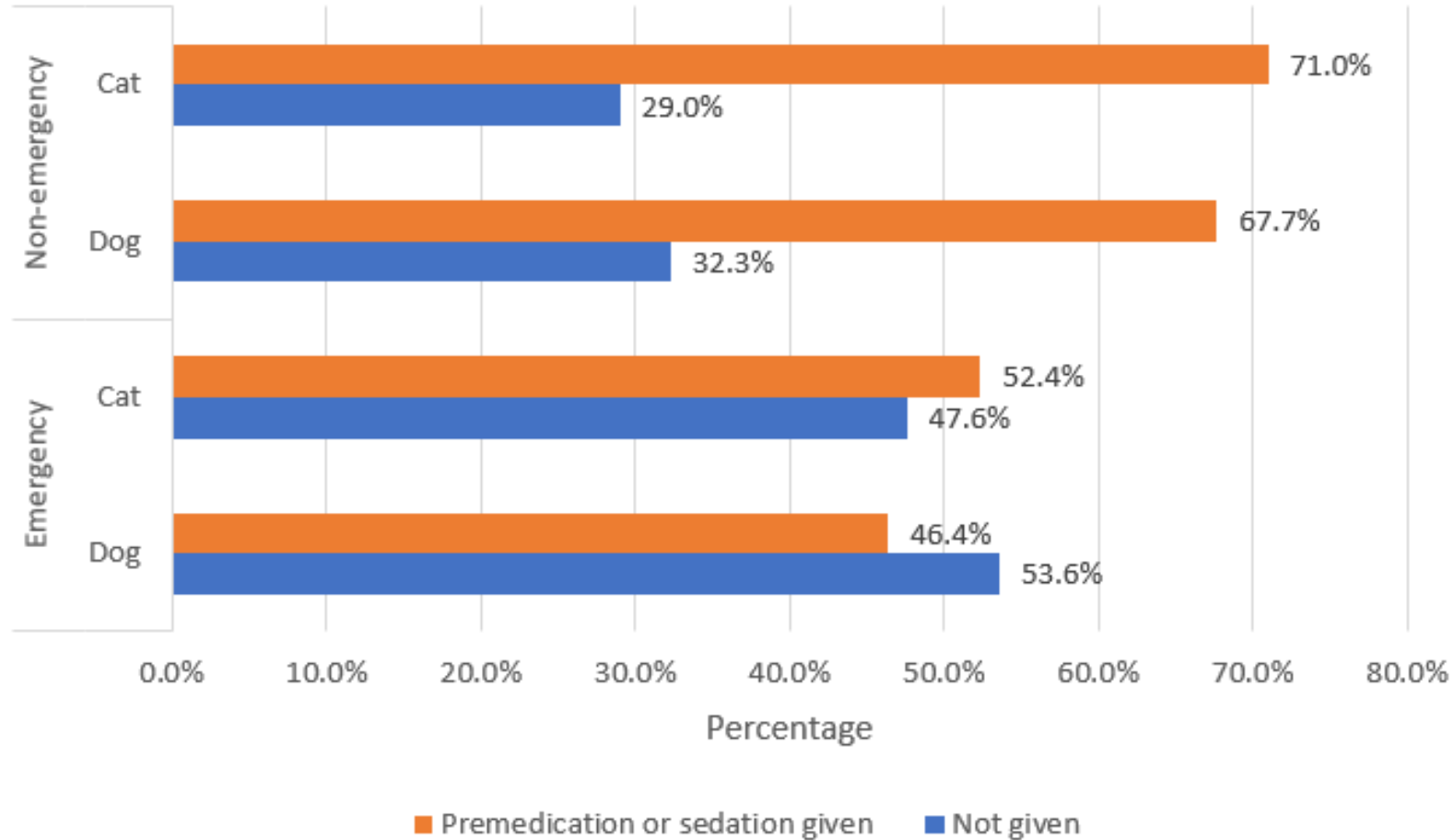
Methods


- Human Research Ethics Committee approval (2021/964).
- Anonymous, online, cross-sectional survey
- Specific questions about euthanasia technique
- Demographic data
- Statistical analysis to identify predictors associated with premedication/sedation administration
- A code-book thematic analysis was used to analyse free-text responses

Respondents



Premedication or sedation

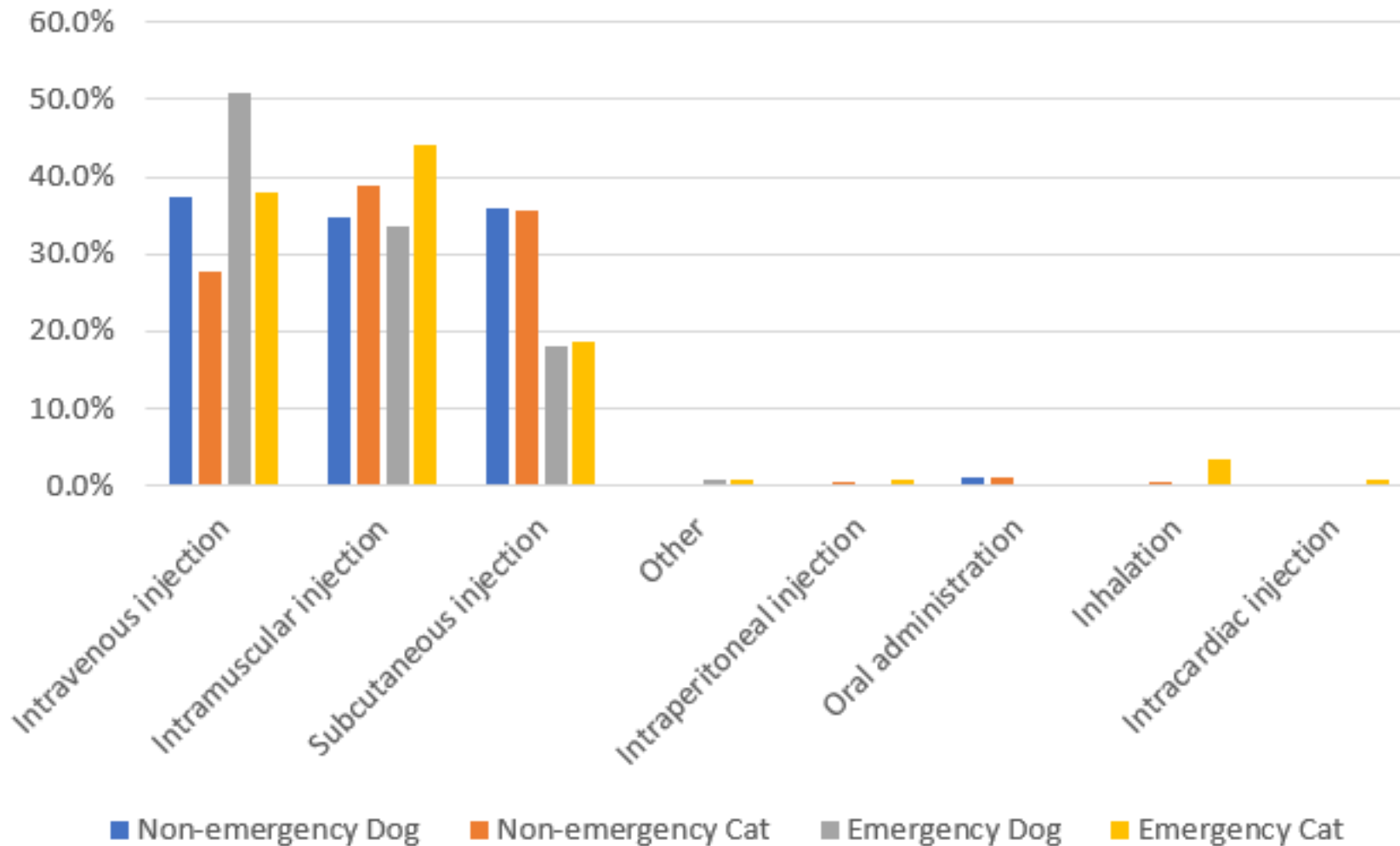




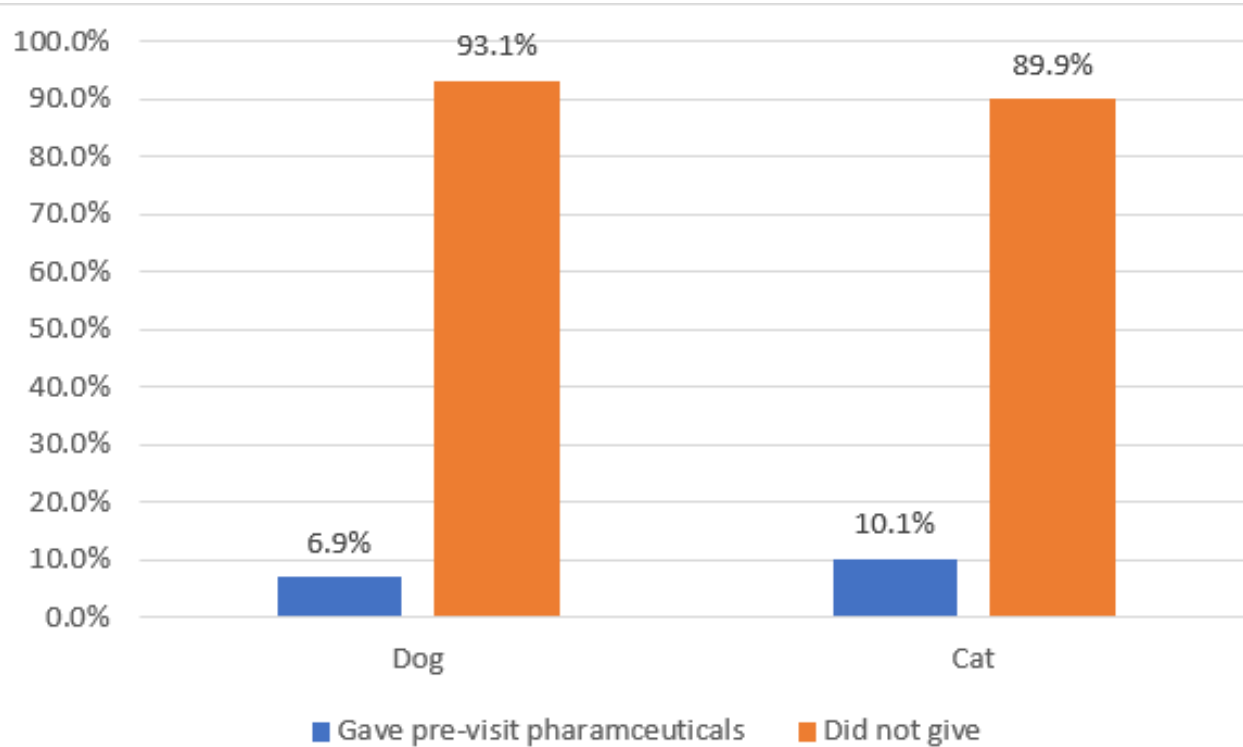
Reasons for premedication or sedation
(descending order of frequency)

1. Reduce stress to patient
2. Reduce stress to owner
3. Chemical restraint
4. Clinic's protocols
5. Taught to administer a premedication prior to euthanasia drugs
6. Other

Route of administration premed/sedation



Pre-visit pharmaceuticals



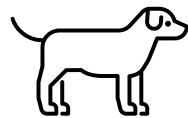
1.
Gabapentin
2. Trazadone



1.
Gabapentin

Adjunctive or non-pharmaceutical measures

- Soft bedding 78.7%
- Away from other animals 78.2%
- Longer appointment time 67.0%
- Treats 59.8%
- Dim lighting 22.7%
- Away from other animals 86.7%
- Soft bedding 73.7%
- Longer appointment time 60.7%
- Pheromones 35.4%
- Cat only consult room 24.1%



Predictors for premedication or sedation

Non-emergency euthanasia

- Female >> Male
- Metropolitan location >> than rural/remote

Emergency euthanasia

- “Other” workplace



Discussion

- First studies documenting euthanasia practices of Australian veterinarians
- Discrepancy btw current recommendations (use pre-medication/sedation) and practices, similar to colleagues in NZ 33% of vets always sedate prior to euthanasia while 20% would NOT use sedation (Gates et al., 2023)
- Scope for increased use of premedication-sedation and pre-visit pharmaceuticals
- Unexpected finding: years of experience did not influence likelihood of use of pre-medication or sedation.
- Free text comments suggest concerns re adverse effects, previous negative experiences, perceived lack of benefit, prolonging experience for client
- In NZ, 41% of vets worked in clinic w euthanasia protocol, of these, 97% of vets followed this (Gates et al., 2023) – suggests veterinarians see value in protocols, possibly protocols may improve confidence and competence



Limitations

- Voluntary survey → non-response bias (may increase respondents with an interest in or salient experience of euthanasia)
- Social desirability bias (may inflate self reported pre-medication/sedation use). Anonymity of survey may reduce social desirability bias.
- Recall bias – attempted to limit by asking for recollection of most recent euthanasia
- Timing of the survey – during the COVID pandemic. May have influenced euthanasia protocols (e.g. physical distancing) (Quain et al., 2022)

Limitations/opportunities

To avoid survey attrition, we did not collect data on:

- dose of pre-med/sedation administration
- rate of administration
- Quality/efficacy of pre-med/sedation
- Patient specific indications/contraindications for administering sedation/premedication
- Quality or quantity of training in euthanasia (NZ graduates ranked euthanasia training as below satisfactory, 74% received no formal training post graduation (Gates et al., 2023)).



How can we improve the welfare of dogs and cats in euthanasia appointments?

1. Develop, standardise and refine dog and cat euthanasia protocols to maximise “positive” euthanasia experiences and minimise adverse events
2. Expand, standardize and refine euthanasia training. Technical aspects should include sedation/anaesthesia, drug doses, routes of administration and non-pharmaceutical measures incl. animal handling
3. Provide euthanasia-specific continuing professional development for veterinarians, veterinary nurses, veterinary technicians and shelter staff.

Thank you!

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- Dr Hedia Chan
- Professor Michael Ward
- Dr Kathrin Schemann



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