

An Overview of AVMA Humane Endings and Related Documents

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SCAW IACUC

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I have no actual or potential conflict of interest in relation to this presentation.

AVMA Humane Endings

History of AVMA's role in Humane Endings

Humane Endings

Key Concepts:

Humane Endings

End-of-Life Decisions

More than just euthanasia



AVMA's Role in Humane Endings

Humane Endings

“Veterinary Profession has special responsibility to animals in all stages of their life...”

The role of the veterinarian can be seen as falling into four areas:

- 1. Human Perspectives**
- 2. Animal End of Life**
- 3. Humane Killing Techniques**
- 4. Disposition of remains**

Humane Endings Guidance

What is it?

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, minor revisions (reflecting substantive updates, but of a less extensive nature than a major revision) are also accommodated.

AVMA Guidelines for the Humane Depopulation of Animals: 2019 Edition

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AVMA Guidelines for the Humane Slaughter of Animals: 2024 Edition

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AVMA Guidelines on... Euthanasia (2020) Depopulation (2019) Humane Slaughter (2024)

AVMA Guidelines for the Euthanasia of Animals

AVMA Humane Endings Guidance Documents

Euthanasia Guidelines

- 1963
- USDA Endorsement
- PHS Assurance
- Use for the Veterinary Profession

In the context of these Guidelines:

(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....

(2) the use of humane techniques to induce the most rapid and painless and distress-free death possible.

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AVMA GUIDELINES FOR THE EUTHANASIA OF ANIMALS: 2020 EDITION

Humane Endings Guidance—Euthanasia

What's Next?

Review and Revision

- The process outlined at the beginning of this presentation is being used.
- **A new Panel will be convened.**
- The Panel will review new information, evaluates the current document.
- **There will be major reformatting of the document.**
- A revision will be available for a member comment period prior to publication.

AVMA Guidelines for the Depopulation of Animals

AVMA Humane Endings Guidance Documents

Depopulation Guidelines

- Emergency Situations
- Complicated and Sensitive Topic
- On going research

- Open comment period
- November 1st 2024
- AVMA members can comment during 90day comment period

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AVMA GUIDELINES FOR THE DEPOPULATION OF ANIMALS: 2019 EDITION

1

AVMA as lead on Humane Endings

Humane Endings Guidance

Why is it important for AVMA?

- Guidance for members—touches every area of veterinary practice
- Used in voluntary animal care programs (companion animal, laboratory animal, food animal, zoos/aquaria)
- Used as a regulatory and legal document
 - Federal, state, local regulations
 - Resources that assist with the implementation of federal agency policy (USDA-APHIS, Public Health Service)
 - In court
- Considered the 'gold standard'—including internationally



Ethics

Laws and
Regulations,
Best practices,
Veterinary Oath

Pathos

Trauma,
Resilience,
Perception,
Mental
Health

Our
Profession

Science,
Evidence
Based
Medicine,
Practicality

Logos



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THANK YOU



The background features a complex geometric design. On the left, there are several overlapping shapes: a dark purple triangle at the top left, a blue square with concentric circles, a light grey semi-circle, a pink square with diagonal lines, a blue square with a white grid pattern, a grey triangle, and a pink square. A white dot is connected by a thin white line to the top-left corner of the pink square with diagonal lines. The main title is in large, bold, white, sans-serif capital letters on a dark blue background.

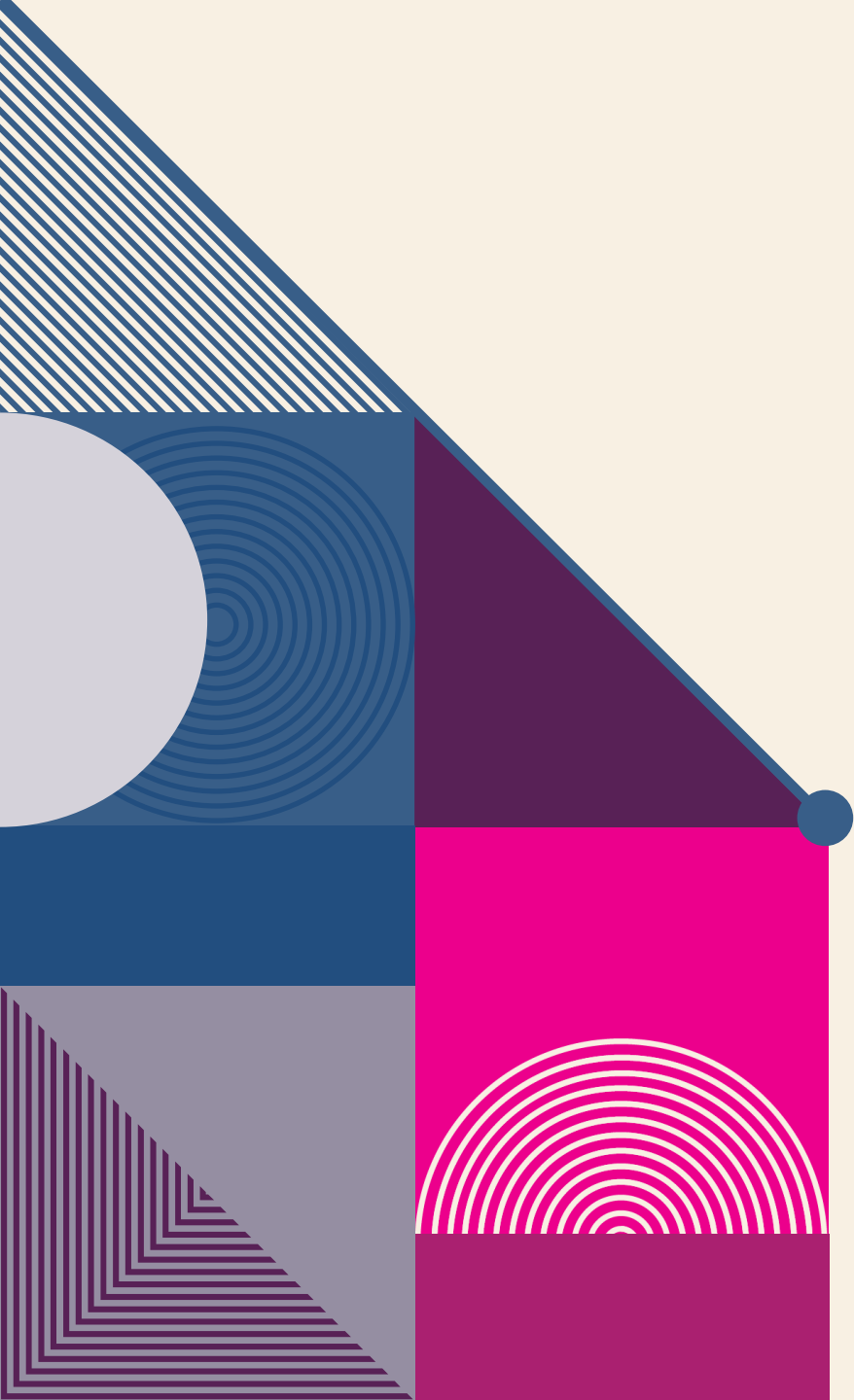
AVMA HUMANE ENDINGS GUIDANCE AND ITS INTERSECTIONS WITH THE IACUC

Debra L. Hickman, DVM, MS, DACLAM, DACAW



DISCLAIMER

- I have no conflicts of interest to declare.
- I appreciate the assistance of Dr. Nathaniel Kollias (AVMA) in the preparation and review of the AVMA portion of this talk
- The opinions in this presentation are mine alone. They do not represent the opinion of AAALAC International



LEARNING OBJECTIVES

Considerations when selecting method of euthanasia

Adoption or reuse of animals

CONSIDERATIONS FOR EUTHANASIA



Biomedical research using animals

- Humane endpoints
- Quality of life/clinical concerns
- End of study
- Animals unable to be used in research

ANIMAL CENTRIC CONSIDERATIONS

There is no perfect method of euthanasia

We continue to search for the best way to maximize animal well-being during the process

They all have some pain or distress associated with them - no exceptions

Goal is to minimize pain and distress

ANIMAL CENTRIC CONSIDERATIONS

- **Most of the time, we are talking about anesthetic overdose**
 - **Injectable anesthetic overdose**
 - Pentobarbital
 - Ketamine/xylazine
 - **Inhalant anesthetic overdose**
 - Carbon dioxide
 - Isoflurane

THOUGHT EXERCISE

**When euthanizing animals,
we use the home cage to
minimize potential
distress.**

**When anesthetizing
animals, we use an
induction chamber.**

If welfare is our top concern, which is right?





HOW DO WE ASK THE ANIMAL?

TYPICAL WELFARE ASSESSMENT

- Corticosterone
- Basic health
- Physiologic changes
 - Cardiovascular
 - Reproductive
- Behavioral changes
 - Stereotypies
 - Compare to normal ethogram
 - Perform active behavioral assessment



TYPICAL WELFARE ASSESSMENT

- Corticosterone
- Basic health
- Physiologic changes
 - Cardiovascular
 - Reproductive
- Behavioral changes
 - Stereotypies
 - Compare to normal ethogram
 - Perform active behavioral assessment

But these do not work well for euthanasia studies. The response we are evaluating is much too short.



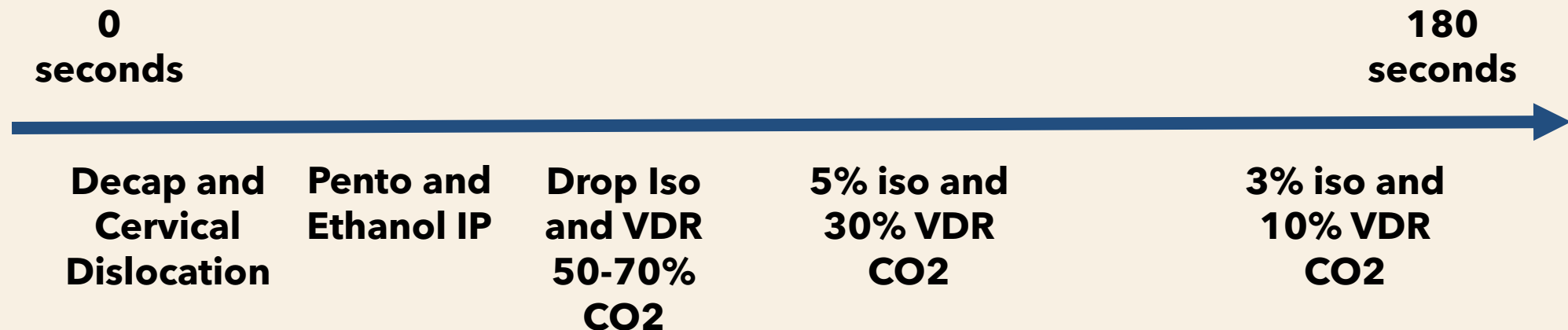
WHEN SHOULD YOU LOOK?

STAGES OF ANESTHESIA

- **Stage I: from beginning of induction of general anesthesia to loss of consciousness**
 - Plane I: no amnesia or analgesia
 - Plane II: amnesic, partial analgesia
 - Plane III: complete amnesia and analgesia
- **Stage II: from loss of consciousness to onset of automatic respiration**
- **Stage III: from onset of automatic respiration to respiratory paralysis**
 - Plane I: Loss of eyelid reflex and swallowing reflex
 - Plane II: Loss of laryngeal reflex and corneal reflex
 - Plane III: Intercostal paralysis and light reflex abolished (surgical plane)
 - Plane IV: Diaphragmatic paralysis (apnea)
- **Stage IV: Apnea to death**

CHALLENGES

- Direct comparison of methods is difficult
 - Variation in time to loss of consciousness



ANIMAL CENTRIC CONSIDERATIONS



Goals:

- Rapid loss of consciousness with minimal pain and distress
- Reliable
- Irreversible
- Compatibility with species, age, and health status

Still much to learn!

PERSONNEL CENTRIC CONSIDERATIONS

Safety

Drug availability and human abuse
potential

Emotional effect on observers or
operators





COMPASSION FATIGUE

Memorial to the animals used in research
(Russia)

THOUGHT EXERCISE

**When euthanizing animals,
we use the home cage to
minimize potential
distress.**

**When anesthetizing
animals, we use an
induction chamber.**

If welfare is our top concern, which is right?

OTHER CONSIDERATIONS

Research Centric

- Compatibility with intended animal use and purpose

Institution Centric

- Legal requirements

Environmental

- Safety for predators or scavengers
- Environmental impacts of the method or disposition of the animal's remains



CONSIDERATIONS FOR REUSE/REPURPOSING

REUSE/REPURPOSING IN RODENTS

- Find alternative uses for surplus animals
 - Incorrect genetic type or sex
- Reuse animals that had been previously used on a study

REUSE/REPURPOSING

- Considerations similar to those in non-rodent species
 - What was done on the original study?
 - Is it reasonable to expect that the original study would not confound the second study?
 - Might a washout period be appropriate?
 - Ethical considerations
 - IACUC review and approval
 - Report previous use when reporting

CASE STUDY

- Problem: Overproduction of rodents
 - Compassion fatigue
 - Overcrowding
 - Euthanizing animals that were not needed

CASE STUDY

- Problem: Overproduction of rodents
 - Compassion fatigue
 - Overcrowding
 - **Euthanizing animals that were not needed**

CASE STUDY

- Problem: Overproduction of rodents
 - Compassion fatigue
 - Overcrowding
 - **Euthanizing animals that were not needed**
- Possible Idea
 - Assist PI's with breeding colony support
 - Creating clearinghouse where Pis' can offer surplus animals
 - But, how?

CASE STUDY

- Resources available
 - Breeding colony team
 - Online database for production data
 - Supportive administration

CASE STUDY

- Resources available
 - Breeding colony team
 - Online database for production data
 - Supportive administration
- Solution
 - Offer breeding colony support for all PI's as part of their per diem
 - Advantages: Compliance, more time for research
 - Create account where surplus animals can be "listed"
 - Logistics, Housing, trackin



CONSIDERATIONS FOR REHOMING/ADOPTION

ACLAM Position Statement on
Adoption of Research Animals
JAALAS 56(6): 807, 2017

REHOMING

- Regulatory oversight?
 - The PHS Policy, the *Guide*, and the Animal Welfare Act are silent on the issues of private adoption of research animals for pets after a study has been completed and the animals are no longer required. The 9 CFR recordkeeping regulations and official policies offer institutions the option of developing and implementing an adoption policy. OLAW is supportive of the concept of adoption but reminds institutions that NIH grant funds may not be used to support the cost of the program. The PHS will not assume legal or financial responsibility for any adoption program or any results of adoption. The institution should ensure that its policy meets pertinent state and local regulations for transfer of animal ownership and is encouraged to coordinate with local animal shelters.

DEVELOPING AN ADOPTION POLICY

- Development of an IACUC policy
- Applicable state and local laws
- Require approval of the AV and others
 - Evaluate health and behavior
 - Notify of potential animal health concerns
 - Provide health history with transfer
 - Vaccinate and spay/neuter animals

DEVELOPING AN ADOPTION POLICY

- Determine which species are appropriate for adoption
- Adopt as permanent pets
- Review adopters
- Genetically modified animals?



DEVELOPING AN ADOPTION POLICY

- Collaborations with outside groups
 - Mission statement
 - Reputation
 - History of involvement with animal adoption
 - Criminal history (background checks)





THANK YOU

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