

Ultimately, each IACUC and the researchers it serves need to find a functional balance between minimizing the regulatory requirements on researchers and ensuring that excellent welfare is being provided for the animals used in research.

Marx is at University of Pennsylvania, School of Veterinary Medicine, Department of Pathobiology, Philadelphia, PA.

RESPONSE

Define record-keeping requirements

Rachel R. Strittmatter, DVM, MLAS, DACLAM & Debra Tiano, MA, CMAR, LATG

Euthanasia is certainly a programmatic area that should be covered as part of the semiannual inspection. Manes' approach of speaking with investigators and their staff members about euthanasia appears to be in line with the expectations of a thorough program review. And Manes is correct that although the regulations and other guidelines do address the requirement to provide a description of the euthanasia method in the IACUC protocol, outside of keeping accurate records on controlled drugs, there is no direction regarding record-keeping for this activity. As a new member, Manes is providing a new (and hopefully welcome) perspective to the Great Eastern University IACUC by bringing up this topic for discussion as part of the program review. At Great Eastern, the investigators are keeping records of euthanasia but these do not include details about the euthanasia method.

It would benefit the Great Eastern University IACUC to establish expectations regarding euthanasia record-keeping and to communicate these expectations to the animal users. Documentation requirements could include specific details such as species, individual animal versus group euthanasia and method of euthanasia (e.g., injectable controlled drug versus carbon dioxide inhalation).

As a best practice, records should include the euthanasia date and method, in sufficient detail to confirm its consistency with the approved IACUC protocol. In the case of animals for which individual medical

records are already being maintained (e.g., nonhuman primates, dogs, pigs), the euthanasia details should be included in the individual animal record. As part of colony or census management, the euthanasia of rodents should be recorded. Individual animal records may not add value in many situations. In these cases, group documentation (e.g., by experiment, by date of birth or by shipment) should suffice. When controlled drugs are used, the total volume dispensed on any given date should be accounted for and recorded. In order to calculate the total amount used, the individual amounts used would need to be tallied. Good Laboratory Practices require that records contain sufficient detail to enable reconstruction of the study.

Although there is no specific requirement to keep records of euthanasia, good records, including amount and route of administration, are the best way to identify and troubleshoot potential welfare, noncompliance or training issues that arise during the procedure. The Great Eastern University IACUC should take this into account as it develops and shares expectations regarding euthanasia documentation requirements with the investigators.

Strittmatter is a Principal Clinical Veterinarian and Tiano is Animal Resources Operations Lead and IACUC Chair at Boehringer Ingelheim Pharmaceuticals Inc, Ridgefield, CT.

RESPONSE

Keep organized records

Pratibha Kapoor, DVM, MS, Cert LAM & Gregory W. Lawson, DVM, PhD, DACLAM

I agree with Manes that research laboratories should keep euthanasia records for research animals. These records could include protocol number; animal identification number (or, for rodent pups euthanized before weaning, the number of pups); location of the animal (room and cage numbers); species; breed or strain; sex; date of birth; date of euthanasia; name, amount and route of administration of euthanasia agent; name, amount and route of administration of sedative; secondary method used to confirm death; and reason for euthanasia. The information in these records is pertinent

to both USDA-covered and non-covered species. The institutional animal resource program can help to design and mandate use of a standardized form for euthanasia records to promote consistency.

Many research laboratories use only one species of animals as their research subjects, but they may utilize different methods of euthanasia¹ depending on the research protocol. I think that organizing the euthanasia records according to the agent used for euthanasia will be more informative than organizing them according to the date of euthanasia. Euthanasia records can be maintained in a folder with various sections, just like the paper records for usage of controlled substances in the research laboratories, which can be inspected by the IACUC members.

As a general practice, research staff members maintain detailed records for all the animals used in a research project that include much of the information listed above. In addition, for USDA-covered species, individual animal charts are maintained and may include much of this information. Research institutions also have some form of animal observation sheets for sick, injured or moribund animals on which the dates of death or euthanasia are recorded. Because all these records are maintained separately, it would be cumbersome to extract all the pertinent information on euthanasia procedures used by a laboratory for analysis. Furthermore, the dates of euthanasia of excess mouse or rats pups at the time of weaning are rarely recorded. These animals are not usually assigned identification numbers or otherwise recorded on the cage cards, which may only contain information on the number of pups born and their dates of birth.

For these reasons, I believe that laboratories should keep dedicated euthanasia records. Such records could be useful in identifying trends in euthanasia practices. For example, if researchers note that excessive number of neonatal mouse pups are being euthanized, they may decrease the number of breeding cages.

1. American Veterinary Medical Association. *AVMA Guidelines for the Euthanasia of Animals: 2013 Edition* (AVMA, Schaumburg, IL, 2013).

Kapoor is a veterinarian in small animal private practice, New Berlin, WI, and Lawson is the Executive Associate Director of Division of Laboratory Animal Medicine, University of California at Los Angeles.

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