 ROSS UNIVERSITY SCHOOL OF VETERINARY MEDICINE	Policy Guidelines for Categories of Animal Use and Rest Periods for RUSVM's Teaching Animals Pol.013	Issued	October 2017
		Revised	November 2020
		Authority	IACUC

I. Background

The RUSVM Institutional Animal Care and Use Committee (IACUC) recognizes that animals can be a valuable resource in a professional veterinary education program providing that appropriate pedagogical merit is provided. The privilege of using animals in teaching at RUSVM requires guidelines be in place to protect their health and welfare by minimizing discomfort, pain and distress and ensuring appropriate respite periods follow all procedures to which they may be subject. In addition to creating consistent procedures for using animals in teaching, this document provides Categories of Animal Use (CAU's) for teaching procedures and corresponding periods of required rest and recovery. Course coordinators and instructors will use this document to provide the IACUC with CAU's for all proposed procedures and to schedule teaching labs using the designated rest periods. Final decisions on the assignment of categories and compliance with guidelines will reside with the IACUC.

II. Purpose

The purpose of these IACUC Policy Guidelines is to protect the health and welfare of all animals belonging to RUSVM's Animal Care and Use Program when such animals are subject to multiple manipulations and/or reuse for teaching purposes. Such protection is afforded through adherence to procedural guidelines governing the use of animals in teaching programs as set out in this document.

III. Scope and Responsibilities


All teaching procedures involving animals owned by RUSVM, either through purchase or donation, fall under the guidance of this document.

These policy guidelines apply to Course/Lab Instructors, Principal Investigators, Teaching Faculty, Animal Care Staff and Technicians, IACUC, Attending Veterinarian and Students working with animals owned by RUSVM in a teaching environment. The Principal Investigator (i.e. Course Coordinator) and the Department Head will have the responsibility of determining appropriate CAU's to be recommended to the IACUC. The Department Head, the IACUC, and the Attending Veterinarian are responsible to ensure adherence in principle to the policies outlined in this document.

IV. Policy and Procedures

A. BACKGROUND

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1. All teaching activities will be assigned a 'category of animal use' (CAU) based on the level of discomfort, and the sum of these will identify frequency of use and appropriate rest periods
2. No teaching activity that causes unalleviated pain or distress is allowed.
3. Individual procedures cause different levels of pain, distress, or discomfort. Each procedure is individually assigned the maximum 'category of animal use' expected from the activity.
 - 3.1. Individual animals may demonstrate sensitivities or enhanced distress to particular procedures. Avoid such procedures on these animals if possible and allow extended or more frequent rest periods for such animals.
 - 3.2. Student inexperience may result in enhanced animal distress/discomfort than normally expected. Level of experience must be considered during assignment of 'category of animal use' of the procedure.
4. An animal use activity that involves multiple procedures to carry out the activity should be assigned a CAU based on the composite of the procedures or the component that is associated with the maximum level of discomfort.
5. Student-animal ratios and instructor-student ratios are such that adequate supervision and monitoring of student performance and animal use and discomfort levels is easily attained during the teaching animal use.

B. CATEGORIES OF ANIMAL USE

1. All categories are subject to interpretation, and instructors should recognize that their expert recommendations as well as the collective expertise and opinions of the members of the IACUC will often be required to decide which category to best assign a given procedure.
2. The assignment of categories must consider the period of time animals spend in the procedure area as the procedure area represents an environment often unfamiliar to the animal and, therefore, contributes to animal distress.
3. The following table outlines the CAU. The composite score will determine maximum frequency of animal use and appropriate rest periods.

Category	Definition
I	<p><i>Procedures causing minimal discomfort of short duration.</i></p> <p>This category includes physical exams, routine handling procedures, husbandry and general health maintenance procedures (i.e. vaccination, hoof trimming), general palpation and auscultation procedures, and similar activities.</p> <p>Weight = 1</p>
II	<p><i>Procedures causing minimal discomfort or stress at time of activity but do not cause discomfort beyond the procedure and have minimal risk for complications.</i></p> <p>This category includes procedures of short-term restraint or positioning of an animal for less than 30 minutes, parenteral injections, urinary catheterization, uterine sampling and similar activities.</p> <p>Weight = 2</p>

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III	<p><i>Procedures causing <u>mild</u> discomfort or stress that have potential to continue to cause some mild discomfort following termination of the procedure, but not to the point of impacting animal well-being. This category carries a minor risk for post-procedural complications that may impact the animal's well-being.</i></p> <p>This category includes procedures of restraint or positioning of an animal for 60 minutes, more invasive procedures such as rectal palpation, bronchoalveolar lavage, endoscopy, arthrocentesis, invasive clinical monitoring such as for ultrasound and similar activities.</p> <p>Weight = 3</p>
IV	<p><i>Procedures causing <u>mild to moderate</u> pain, distress, or discomfort and have potential to cause a moderate risk for complications or residual pain and discomfort that can impact animal well-being. Procedures in this category may require use of sedation, regional anesthesia, general anesthesia, and/or use of analgesics.</i></p> <p>This category includes procedures of restraint or positioning of an animal for 120 minutes, minor surgeries that do not involve entering a body cavity, and similar activities.</p> <p>Weight = 4</p>
V	<p><i>Procedures causing <u>moderate to severe</u> pain, distress, or discomfort that will be alleviated by use of analgesics and/or anesthetic regimens.</i></p> <p>These include major surgical procedures that involve entering a body cavity and procedures requiring restraint of an animal or positioning of an animal greater than 120 minutes.</p> <p>Weight = 5</p>


4. Appropriate physical and/or chemical restraint methods are suggested for the safety of the animals, teaching faculty and staff and/or students using the animal. A description of the physical and/or chemical restraint as well as the procedure area and how animal safety and monitoring is assured in these areas is expected in the IACUC protocol and appendices.
5. All CAU's require instructor supervision at all times during the animal use activity.
6. Animals should be moved to procedure areas by animal care staff. Students should not be asked to move animals from their housing location to the procedure area unless under the direct supervision of an animal care staff member or teaching faculty.

C. MAXIMUM USE ALLOWANCE, REST PERIODS AND DURATION OF RESIDENCE

1. Maximum Use Allowance

- 1.1. Each procedure is assigned a weight equal to the particular CAU. Maximum use is determined based upon the sum of weights associated with the category under which each procedure has been assigned.
- 1.2. No individual animal can be subjected to a maximal combined weight greater than 5 in any 24-hour time period when the procedures fall within categories II-IV.

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- 1.3. No individual animal can be subjected to a maximal combined weight greater than 7 in a one week time period when the procedures fall within categories II-IV.*
 No individual animal can be subjected to a maximal combined weight greater than 12 in a 4 week time period when the procedures fall within categories II-IV.*
- Animal use falling within category I should be considered in the total animal use at the discretion of the course coordinator, AV and IACUC.

2. Rest Periods during teaching semesters

- 2.1. All animals are assigned a rest period, which is based on the CAU and the overall number of procedures performed on an individual animal
- 2.2. In addition to the general guidelines regarding maximum use allowance, the following minimal rest periods are considered:

Category	Minimum Rest Period
I	No rest period required
II	Minimum 24 hours post procedure
III	Minimum 48 hours post procedure
IV	Minimum 96 hours post procedure
V	Minimum 2 weeks rest period when a second category I-IV procedure performed


- 2.3. Appendix A summarizes the CAU's and associated rest periods for the existing teaching procedures at RUSVM. For new teaching procedures, table 2.2. should be used to determine minimum rest periods.

3. Rest Periods in between teaching semesters

- 3.1. Each animal must be allowed a minimum of 12 weeks/year of prolonged rest from all teaching activities. These may be scheduled as three separate 4-week uninterrupted rest periods
- 3.2. At the discretion of the AV and in consultation with the responsible departmental teaching faculty, these rest periods may be prolonged for particular animals.

4. Teaching Animal Replacement

- 4.1. Animals should not remain indefinitely. The IACUC appreciates the importance of well-behaved and well-trained animals for teaching purposes and desire to maximize the use of such animals. However, a clear final disposition plan is required for resident animals.
- 4.2. The replacement terms for the resident teaching animal colony are described in the species-specific IACUC acquisition and processing SOP's.

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- 4.3. Animals removed from the Animal Care and Use program should be adopted, shipped for slaughter, or humanely killed as appropriate for the species involved and per the applicable IACUC SOP.
- 4.4. The Attending Veterinarian is responsible for determining the suitability of animals which remain in the teaching program.

5. Deviations

The IACUC expects any individual witnessing a deviation from policy and procedure to report the deviation to the IACUC or the Attending Veterinarian. The individual has the possibility to report anonymously following the IACUC whistle-blower policy. It is the responsibility of all members of RUSVM's Animal Care and Use Program to assure that animal use is conducted according to IACUC policies and US regulations on animal teaching, research and testing.

SOP Approval:

Signed

Date


References:

IACUC Whistle-blower Policy

New Sheep Processing SOP


Equid Acquisition, Processing and Acclimatization SOP

Selection, transition, retirement of RUSVM resident dog colony SOP

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Appendix A: Animal Rest Periods for Existing RUSVM Teaching Labs

Category V	14 days rest before second category I-IV performed	Number of attempts allowed per day
	Castration	n.a.
	Ovariectomy/OVH	n.a.
	Abdominal Surgery	1
Category IV	7 day rest post procedure	Number of attempts allowed per day
	General Anesthesia	1
Category III	3 day rest post procedure	Number of attempts allowed per day
	Joint injections	2 major joints with 2 attempts per joint space
	Epidural	2
	Abdominocentesis	2
	Nerve Blocks	6
Category III	2 day rest post procedure	Number of attempts allowed per day
	Orogastric Intubation	2
	Palpation/Ultrasound per rectum	4
	Otoscopic exam	4
	Digital rectal exam	3
Category II	1 day rest post procedure	Number of attempts allowed per day
	Venous blood sampling	3
	Intramuscular injection	2 attempts/site (max 3 sites)
	Intravenous injection	3
	Intravenous catheterization	3
	Subcutaneous injection	2 attempts/site (max 3 sites)
	Eye diagnostics (topical)	4
	Vaginal examination (manual and/or speculum/swab)	3
	Uterine Biopsy	1
	Uterine culture/cytology	3
	Urethral catheter placement (male or female)	2
	Dental examination (including floating with speculum)	2
	Passage of Frick speculum with oro-rumen tube	2
	Oral examination with full mouth speculum	2
	Passage of insemination rod	4

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Category I	No rest period post procedure	Number of attempts allowed per day
	Bandaging	10
	Ultrasound of thorax, abdomen, limbs, scrotum	10
	Body condition scoring	n/a
	Lameness examination (walk, trot, flexion tests)	n/a
	Hoof testing	6
	Hoof trimming	n/a
	Physical examination	10
	Haltering	10
	Restraint with chain shank	10
	Application of twitch to upper lip	6
	Radiographs of limbs	n/a
	Rebreathing exam	2
	Semen collection	5

* Sedation may be performed as part of any of the procedures. The category will be a minimum of a Category III if sedation is used.

* A protocol may receive IACUC approval which will supersede these guidelines (specific protocols may require less frequent rest periods).

* Concurrent procedures may be performed with IACUC approval. This document does not assume that only one procedure will occur. With multiple procedures, the one with the higher rest period category will be observed.

* One day is a minimum of 24 hours.