

AUSTIN HEALTH AEC (2021) GUIDELINE FOR ANIMAL MONITORING AND ASSESSMENT

1. PURPOSE

The purpose of this guideline is to enable compliance with *The Australian Code for the Care and Use of Animals for Scientific Purposes 8th Edition 2013 (the CODE)*.

The guideline will assist all those working with animals for scientific purposes to ensure that the health of their animals is appropriately monitored and assessed.

Relevant Sections of the CODE are:

2.1 Responsibilities of Institutions

2.1.5 Institutions must promote compliance with the CODE by:

(ii) providing adequate resources to ensure that the AEC and people involved in the care and use of animals can meet their responsibilities, including monitoring animals and managing adverse impacts on their wellbeing

(v) ensuring that guidelines for animal care and use are developed in consultation with the AEC, approved by the AEC, and implemented and promoted within the institution. Guidelines must include:

(c) monitoring and assessment of animals to ensure that any harm, including pain and distress, is promptly detected and managed

2.1.7 Institutions must identify clear lines of responsibility, communication and accountability by:

(i) ensuring that a person is responsible for the wellbeing of animals at any given time and is clearly identified so that: (a) animal wellbeing is monitored by competent people at all stages and sites of animal care and use. The scope of day-to-day monitoring must be clearly outlined and communicated to all parties

2.4 Responsibilities of investigators

2.4.8 During planning, investigators must consider the following factors and be satisfied that:

(xiv) procedures are in place for monitoring and managing animal health during the project (see Clause 3.2.1)

2.4.18 Investigators must take steps at all times to safeguard the wellbeing of animals by avoiding or minimising known or potential causes of harm, including pain and distress, to the animals. Steps include:

(vi) ensuring that animals are monitored and assessed at all stages of the project for signs of pain and distress, including deviations from normal behaviour (see Clauses 3.1.20–3.1.21). Such monitoring and assessment must be

conducted at a frequency sufficient to detect such signs at an early stage, as determined by the procedure, and ensure that the planned endpoints are detected

(vii) maintaining records of monitoring and assessment of animal wellbeing (see Clauses 2.4.30– 2.4.33 and 3.1.22)

2.4.20 Investigators must:

(ii) ensure that the scope of monitoring the wellbeing of the animals at all stages of their care and use in the project is clearly outlined and communicated to all parties. Depending on the type of project, this may include monitoring by animal carers.

2.4.31 Investigators must ensure that records of monitoring and assessment of animals are in accordance with Clauses 3.1.21–3.1.22.

2.4.32 Investigators must ensure that records include:

(ii) the number of animals used

(iii) details of procedures, including dates, substances administered, analgesia and anaesthesia, and any unexpected outcomes

(vii) names and contact details of people responsible for monitoring and emergency incidents.

Responsibilities of Animal Carers

2.5.5 Animal carers must:

(ii) monitor and assess the wellbeing of animals for which they are responsible (see Clause 2.5.1) with sufficient frequency to ensure that harm, including pain and distress, is promptly detected and managed (see Clauses 3.1.20– 3.1.21). Where animal carers are involved in the monitoring and assessment of animals after they have been supplied to an approved project, the investigator must ensure that the scope and responsibilities for day-to-day monitoring are clearly outlined and communicated to all parties

(iii) maintain records of monitoring and assessment of animal wellbeing (see Clause 3.1.22)

2.5.11 Animal carers must maintain records of the care and monitoring of animals and, for breeding facilities, the health status and breeding performance of animals (see Clauses 3.1.22, 3.2.2 and 2.4.27 [v]). Animal carers must make these records available to the institution, the AEC, authorised external reviewers and, if relevant, investigators.

2.5.12 Records of animal monitoring must be sufficient to enable the AEC to verify that the wellbeing of animals has been monitored, and allow review and critical investigation of the cause(s) of and responses to unexpected adverse events as a basis for future prevention strategies.

2.7 Responsibilities of institutions when developing an animal ethics committee application form

Avoiding or minimising harm, including pain and distress, to animals (see Clauses 1.1 [iii] and 1.10– 1.14)

(xv) details of how the wellbeing of animals will be monitored and assessed throughout the project, the frequency of monitoring and assessment, the actions to be taken if problems are identified, and the criteria for intervention points and humane endpoints (see Clauses 3.1.20–3.1.28)

3.1 Strategies to support and safeguard animal wellbeing

3.1.1 The planning and conduct of activities involving the care and use of animals must support and safeguard animal wellbeing. Steps include:

(ii) taking steps to avoid or minimise adverse impacts, including setting intervention points and humane endpoints, and monitoring animals

3.1.20 Animals must be monitored and assessed: (i) by a competent person who is knowledgeable about the normal behaviour and signs of pain and distress for the species, or a person under the direct supervision of a competent person

(ii) with sufficient frequency to ensure that any harm, including pain and distress, is promptly detected and managed

(iii) in accordance with the AEC approval for the project or activity.

3.1.21 Methods for monitoring and assessment of animal wellbeing should include:

(i) the criteria that will be used to assess wellbeing

(ii) the level and frequency of monitoring to ensure that any changes in an animal's condition are detected early

(iii) the criteria that will be used to determine when action is required

(iv) actions that will be taken so that adverse impacts on animal wellbeing, including predicted effects and unforeseen complications, are addressed rapidly and effectively

(v) the methods for recording observations, treatments and actions

(vi) flexibility to ensure a rapid and effective response to changes during the course of the project or activity.

3.1.22 Records of the monitoring and assessment of animal wellbeing must be:

(i) sufficient to enable the AEC to verify that the wellbeing of animals has been monitored as agreed, and allow review and critical investigation of the cause(s) of and responses to unexpected adverse events as a basis for future prevention strategies

(ii) accessible to all people involved in the care of the animal

(iii) available for audit by the institution, the AEC and authorised external reviewers.

3.1.23 Prompt action must be taken based on the monitoring and assessment of animals, in accordance with:

(i) institutional and AEC policies and procedures (see Clause 2.1.5 [v] [c])

(ii) the intervention points and humane endpoints approved by the AEC for a project, or actions documented in procedures for animal care approved by the AEC.

2. GENERAL

Animal monitoring and assessment is an important component of the refinement principle. It enhances animal welfare and reduces the risk of undue pain and distress.

When formulating a monitoring plan and associated records of animals prior, during and post procedure the following should be considered:

- The species and strain of the animal undergoing the procedure.
- The duration of the procedure.
- The impact of the procedure on the animal.
- The impact of cumulative procedures (cumulative burden) on the animal.
- The impact of associated medications given to the animal, including anaesthesia and analgesia and any contraindications.
- Monitoring considerations as per the AEC approved protocol.

The monitoring records must include the following general information:

- Protocol/project number and title.
- Principle investigators name.
- Name of investigator(s) primarily responsible for the procedure and /or performing the procedure.
- Contact details for the above and emergency contact details.
- A clear line of reporting and responsibility for the animals and associated contact details.
- Provision to include source of animal and date of arrival.
- Date of procedure and type of procedure performed as well as date of endpoint/cull.
- Detailed and well defined monitoring parameters for each body system potentially affected by the procedure.
- Detailed and well defined end points for each of these parameters and for cumulative scores if animal undergoing a number of procedures.
- Detailed description of emergency procedure and how the animal is to be treated/culled if this occurs.

The Austin animal monitoring template and severity scoring table is designed as a template and investigators should adapt this form to ensure that animals are appropriately monitored given the nature of the procedures and the predicted severity scoring with each clinical sign.

Please be aware that monitoring sheets must be kept in the room with the animals at all times. One monitoring sheet per cage is sufficient. However, if an animal scores above a zero or the AEC deems the protocol to be invasive then individual monitoring sheets must be used.

Animal Surgical Monitoring

For animal surgery/anaesthetic monitoring the record must include:

- What has been given, anaesthetics and analgesia
- Time it was administered
- Any other therapies, i.e. fluid replacements
- Time the animal/s regained consciousness
- Any incidents when the animal was under anaesthetics

- Any events or complications for e.g. blood loss or spasms
- Post recovery monitoring (Transfer to standard animal monitoring sheet)

Austin Health Animal Monitoring and Surgical Templates can be downloaded from:

https://www.austin.org.au/Animal_Ethics_Submissions/New_Applications/

3. ANIMAL TECHNICIAN MONITORING

Animal technicians will perform weekly cage, food and water changes and general animal husbandry duties. This includes daily welfare checks of the general wellbeing of animals but does not include protocol specific monitoring (unless requested via BRForders@austin.org.au service charges apply).

If animal technicians are required to monitor animals post procedurally and/or as per an approved AEC protocol they are obligated to be included in the protocol and appointed at the discretion of the BRF Manager. If an animal technician, during the course of their normal duties, determines an animal requires closer monitoring or is unwell, they will endeavour to contact the investigator(s) listed as primarily responsible for that animal and the PI.

If investigators are unavailable, the BRF Manager and/or AWO and/or Veterinarian will be contacted and the responsibility for animal welfare will be assumed by these staff. Actions regarding further monitoring, analgesia or culling will then be decided by these staff. If necessary the adverse event process will then be implemented.

In the case of severe animal pain or distress, the Code and Prevention of Cruelty to Animals Act 1986 are clear that the animal must be culled immediately as animal welfare **always** takes precedence over experimental endpoints. In this case, all attempts will be made to contact the PI and the investigator primarily responsible for the animals, but if unavailable then the animal technician will contact the BRF Manager and/or the AWO who will assume responsibility for the welfare of that animal, which includes immediate euthanasia. If the BRF Manager/AWO or the Veterinarian are not available then the animal technician may assume responsibility for the welfare of the animal, including immediate euthanasia. If necessary the adverse event process will then be implemented.

It is recommended that the technician/staff responsible take pictures of the animal prior to death and during the necropsy (if performed on the researcher's behalf) to assist with any reporting requirements.

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