Guidance on Prompt Reporting of Adverse Events and Unexpected Outcomes

(For use in reporting adverse events or unexpected outcomes associated with Laboratory animal use. Please see pages 28-29 in the Guide for the Care and Use of Laboratory Animals eighth edition, for further information.)

What is an unexpected outcome?
Unexpected outcomes are undesirable effects that result from or occur during or following, a research procedure or teaching activity (e.g., use of a mediation, medical device, or other biological product, surgical procedure, handling, pilot study, genetically modified animals, etc.). These undesirable effects negatively impact animal welfare and were not expected or anticipated during the planning of the research. They may or may not be cause by a product or device.

Who should report unexpected outcomes?
Unexpected outcomes should be reported by the principal investigator for the protocol that covers the affected animal(s). Investigators should promptly report the outcomes to the IACUC so that the IACUC can help assure that the problems are addressed in a timely manner and that potential pain and distress for the animal(s) have been addressed.

What information needs to be reported?
The report should include the nature of the event, how the event and animal welfare were monitored or addressed, and what immediate and long-term steps are being taken or considered to prevent reoccurrence of the event.

Why should unexpected outcomes be reported?
The IACUC is responsible for monitoring the animal research and teaching activities described in the IACUC-approved protocol. Reporting unexpected outcomes assists the IACUC in this role. It also allows principal investigators, animal care staff, and the attending veterinarian to evaluate the cause of unexpected outcome and consider changes in the protocol or standard operating procedures to prevent reoccurrence.

What are examples of unexpected outcomes that must be reported?
Deaths of animals not expected or described in the animal care and use proposal or when a significant number of animals die; e.g. the majority of the animals in the protocol become sick immediately after shipping due to weather conditions when they arrive; 9 out of 10 animals die immediately after shipping; an animal is found dead the day after surgery; significant loss of life due to a disease outbreak.

Study-related complications not expected as part of the research design; e.g. an animal has an allergic reaction to a treatment; anesthetic approved for the study doesn’t adequately work; animals develop an infection following surgery. Note: This includes death due to anesthetic overdose.
More death or complications than described in the animal care and proposal; e.g., 10% of the animals die following surgery when a 5% mortality rate was expected and justified in the animal care and use proposal; an animal appears to be in more pain or distress from a procedure than expected.

Use of a pilot study; when outcomes of the pilot study are different that the anticipated outcomes written in the protocol.

Use of genetically modified organisms; where there is inherent potential for unanticipated phenotypes. Regardless of whether genetic manipulation is targeted or random, the phenotype that initially results is often unpredictable and may lead to expected or unexpected outcomes that affect the animal’s well-being or survival at any stage of life.

**How do I avoid making many reports for things that normally happen?**

A report is not required if the IACUC is aware that an adverse event may occur and the event has happened as was described in the approved animal care and use proposal. If an investigator expected certain complications to occur as a result of research or teaching procedures, based upon their experience, the literature or current knowledge, those complications should be identified and explained as a possible adverse events in the animal care and use proposal or in subsequent addenda. For example, list potential mortalities from induced infection, expected death loss or other outcomes in the clinical signs that would warrant removal from study or euthanasia in the animal care and use proposal. If a proposed addendum is expected to result in certain complications, those complications should be identified and explained in the question regarding adverse events in the form.

**Who is responsible for ensuring that animals are shipped safely and for reporting adverse events that occur during shipping of animals to or from Marquette University?**

The Office of Laboratory Animal Welfare (OLAW), Department of Health and Human Services, guidance indicates that “OLAW expects all partied involved to apply due diligence in assuring that animals are shipped under appropriate conditions to prevent morbidity or mortality due to temperature extremes or other adverse events. When animals are shipped from an institution, that institution should consider and address all relevant factors to ensure safe transport of the animals. OLAW expects shipping institutions to report adverse events that occur to animals in transit. Receiving institutions should notify the shipping institution when animals are received in extremis or dead.” (PHS Policy on Human Care and Use of Laboratory Animals, Frequently Asked Questions, [http://grants.nih.gov.grants/olaw/faq.htm](http://grants.nih.gov.grants/olaw/faq.htm))

**What if an adverse event occurs that negatively impacts animal welfare but is not related to research or teaching procedures?**

Adverse events that occur which are not related to research, or teaching procedures that jeopardize the health and well-being of animals, should be reported to the IACUC. Generally, the individual responsible for oversight of a laboratory should inform the IACUC of the adverse events, including the corrective actions implemented to help prevent further events.
Examples of adverse events include:

Facility or equipment failure has, or may have an impact on animal welfare; e.g., an animal injured in a malfunctioning restraint device; power outage, resulting in lack of ventilation; animals have been terminally injured due to malfunctioning equipment.

Poor facility, husbandry, or care has, or may have, an impact on animal welfare; e.g., animals develop sore feet caused by cage flooring.

**What is the IACUC process for review of unanticipated outcomes/problems, adverse events?**

All adverse event or unexpected outcomes are forwarded to the IACUC for their information and are placed on the agenda for the monthly meeting following receipt. The IACUC Chair, Attending Veterinarian, and Research Compliance Officer review the report to determine if immediate review is needed. If IACUC members are satisfied that the event has been appropriately addressed, the report will be filed with no further action taken; the principle investigator will be notified of the committee’s decision. If IACUC members have concerns regarding the resolution to the unexpected outcome, the IACUC will initiate communications with the investigator. The principle investigator is welcome to attend the IACUC meeting at which the report will be reviewed.

Reference:
University of Kansas Medical Center
Institutional Animal Care and Use Committee
Reporting Adverse Event of Unanticipated Outcome/Problem

University of North Carolina Charlotte
Institutional Animal Care and Use Committee
Reporting Responsibilities and Procedures (Unexpected Outcomes/Death of Research Animals)

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