



WORKSHOP

*Friday October 17, 2003
Bayview Conference Centre, Monash University, Melbourne, Victoria*

MONITORING ANIMAL WELFARE and PROMOTING REFINEMENT

Report of Proceedings

Sponsored by the Bureau of Animal Welfare, Department of Primary Industries, Victoria, Australia

Australian and New Zealand Council for the Care of Animals in Research and
Teaching 2003

**MONITORING ANIMAL WELFARE
and
PROMOTING REFINEMENT**

Proceedings of the Workshop
held on
Friday October 17, 2003
at the
Bayview Conference Centre, Monash University, Melbourne, Victoria

Edited by
Rory Hope

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Australian and New Zealand Council for the Care of Animals in Research and Teaching (ANZCCART)
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Conclusions and recommendations

The main points that emerged from the workshop and suggestions for change (shown in bold italics) are summarised below:

In general, the standards of monitoring and recording animal welfare are good. However, in some instances, these standards may be inconsistent and inadequate.

Institutions, perhaps through their Animal Ethics Committees, should continue to encourage an ethos amongst investigators, that the monitoring of animal welfare is an integral part of good research.

There is a tendency for some research scientists to leave the responsibility of animal welfare to animal facility staff.

Animal welfare must be seen as a shared responsibility, and ways need to be developed to encourage close involvement by scientists. There should be more face-to-face contact and discussion amongst researchers, animal facility staff and members of AECs.

Understaffing of animal care facilities can lead to inefficient monitoring.

Institutions and researchers should be made aware of the essential nature of monitoring animal welfare and be encouraged to devote sufficient resources to this task.

Uninformed enthusiasm for “enrichment” in animal breeding facilities can detract from more basic monitoring needs.

Strategies should be developed so that staffing and equipment resources available in animal breeding facilities are used to optimise animal welfare outcomes.

The lines of reporting associated with animal monitoring are sometimes unclear.

The development and use of standardised forms of electronic reporting and centralised monitoring should be encouraged.

There is a need for continued improvements to be made in the collection of quality national statistics on the use of animals for teaching and research. However, the volume of paperwork, the sometimes confusing nature of the data required, and a lack of understanding about the use to which the data may be put, are retarding progress.

The collection and dissemination of national statistics is an integral component of monitoring animal welfare. Resources should be devoted to the continued development of this important area.

There are special problems associated with field studies. These include i) assessing the impact of such studies at the population level, and ii) monitoring work at remote locations.

Expert advice should be sought by Animal Ethics Committees in assessing applications for field work. Such advice should include a careful assessment on any undesirable impact of the research. Before approving field studies, AECs should develop effective plans for independently monitoring the work.

There are special problems posed by the development and breeding of genetically modified organisms (GMO), largely resulting from phenotypic unpredictability and consequent welfare implications.

In assessing GMO protocols, AECs should draw on a broad range of skills. This will often require the co-opting of additional expertise when such cases are considered. Staff in animal care facilities should be closely involved from the outset. Consideration should be given to developing courses aimed at training animal carers in the special needs of monitoring GMOs.

There is a potential for conclusions about animal welfare, when based on subjective assessments of behaviours, to be incorrect.

Individuals involved in planning and monitoring should, where practicable, be trained in animal behaviour.

The general level of understanding of the contribution of work involving animals to biomedical research should be improved, as should the animal welfare and ethics implications of such work.

Consideration should be given to the introduction of formal courses in welfare and ethics in schools and higher education institutions.

Strong support was expressed for animal facility staff being represented on Animal Ethics Committees.

It was agreed that the important elements of high quality animal welfare monitoring are:

- i) adequate training and resources;
 - ii) commitment;
 - iii) experience;
 - iv) preparedness to adopt change; and
 - v) team work.
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Background

When animals are used for scientific purposes, both the need for and the importance of monitoring their well-being is not questioned. Such monitoring enables us to ensure that i) animals are maintained in circumstances which support their specific physiological, behavioral and psychological needs, ii) the impact of experimental procedures are managed and iii) unforeseen complications are promptly detected so that remedial action may be taken. Monitoring animal welfare is essential both to achieve the goals of refinement and for accountability of approved use of animals: it facilitates modification of practices and procedures to minimise any negative impact on animals and confirms animal welfare standards have been maintained.

Aims

Animals need to be monitored in a range of circumstances and conditions and the same approach will not suit every situation. The purpose of this workshop was to consider, when animals are used for scientific purposes, the range of circumstances and variety of conditions under which their well-being needs to be monitored. The workshop focused on issues which influence the approaches to monitoring animal welfare in different circumstances, as in routine animals care, specialised breeding and specific experimental protocols. Monitoring animals under laboratory and field conditions was also discussed.

Workshop and report formats

This report follows the sequence of presentations and discussions that took place at the workshop. After being welcomed by Rory Hope, delegates were presented with seven short (10 min.) talks, highlighting issues and expectations related to welfare monitoring, from different perspectives. The aim of this first session, Chaired by Margaret Rose, was to set the scene by providing a wide coverage of views that would stimulate discussion. The second session Chaired by Graham Jenkin was a general brainstorming session aimed at identifying and prioritizing key issues for discussion by five working groups. The contents of this session is not reported. In Session 3, delegates were divided amongst 5 separate working groups, and each group was given a set of topics to discuss in detail. The groups were convened by 1) Magdoline Awad, 2) Jane Girling, 3) Deborah Kelly, 4) Elaine Major and 5) Sue Peirce. Delegates then reassembled for Session 4, Chaired by Denise Noonan, in which the convenors of each working group reported on their deliberations and recommendations. In the concluding session (Session 5) Margaret Rose summed up the days proceedings.

Invited speakers and chairpersons

Dr Magdoline Awad, Acting Chief Veterinary Officer, RSPCA (New South Wales)
Ms Patricia Baitz, Category D Member, Monash University Animal Welfare Committee
Dr Kate Blaszak, Principal Veterinary Officer, Bureau of Animal Welfare, Dept. Primary Industries, Victoria
Dr Carol Ginns, Animal Welfare Officer, University of Melbourne
Dr Jane Girling, Dept. of Obstetrics and Gynaecology, Monash Medical Centre
Dr Rory Hope, Director ANZCCART, C/o University of Adelaide
Professor Graham Jenkin, Department of Physiology, Monash University
Dr Deb Kelly, Policy Officer Animal Welfare, Department for Environment and Heritage, S.A. Government
Ms. Elaine Major, Manager Animal Services, Biotechnology Centre, Walter and Eliza Hall Institute, Melbourne
Mr Stephen Marshall, Director Animal Services, Monash University
Dr Catherine Meathrel, Department of Environmental Management and Ecology, La Trobe University
Dr Denise Noonan, Animal Welfare Officer, Monash University
Dr Sue Peirce, Veterinary Surgeon, St Vincent's Hospital, Melbourne
Assoc. Prof. Margaret Rose, Prince of Wales Clinical School, University of NSW; Director of *Animal Care*; Chair, Animal Research Review Panel, NSW Agriculture
Dr David Taylor, Department of Pharmaceutical Biology and Pharmacology, Victorian College of Pharmacy

Introduction

Rory Hope welcomed the 95 participants and thanked the workshop sponsor, the Bureau of Animal Welfare, Dept. of Primary Industries, Victoria. He emphasised the crucial nature of the interface between the animal and the research worker / animal carer, and pointed out the fundamental importance of monitoring animal welfare as a means of promoting “refinement”. He then introduced Margaret Rose, to chair the first session.

Session 1

Setting the scene

A series of short presentations to highlight issues and expectations from different perspectives.

Chairperson: Margaret Rose

Department of Medicine, Prince of Wales Hospital (University of NSW); Director of *Animal Care*

Monitoring and refinement from the perspective of a Category D, AEC member

Patricia Baitz

Category D Member, Monash University Animal Welfare Committee

Monitoring animal welfare?

What does this mean? – certainly different things depending on whom you are and what you do.
The Pocket Oxford Dictionary definition of the 3 words:

- **Monitor**
Senior schoolboy placed in authority – yes – you may check this for yourselves!
One who listens and reports on – foreign broadcasts, misuse of official telephones etc. (more on that later).
- **Animal**
Other than man !! Being endowed with life, sensation and voluntary motion.
- **Welfare**
Good fortune. Well being of a person or community

I am going to suggest a few ideas to you and see what we come up with as a result.

The title in itself is confusing – it suggests that we need to monitor the monitors.

How many monitors do we need?

We have:

1. The researchers who are responsible for their animals.
2. Animal house staff
3. AECs
4. In the case of Monash University – the Monash University Animal Welfare Committee
5. The Bureau of Animal Welfare
6. NHMRC.

Is this enough?

Is this good enough?

What are we looking for?

Are we succeeding?

- With knock-outs and knock-ins we have more and more animals.

Can we cope?

- If we are breeding we don't need approval
- Are we out of control?
- Australia has a wonderful system – but
- Should we pay the outside members of AECs?

- Fieldwork
- Tasmania monitors Australian Antarctica. Really - how?

3 Rs: Reduction, Refinement, and Replacement

4th R “Really”

We all have a differing view on welfare and enrichment and we can't “talk to the animals” but we can use common sense and gut feeling.

Monitoring and refinement from the Bureau of Animal Welfare (BAW) perspective

Kate Blaszak

Principal Veterinary Officer, Bureau of Animal Welfare, Department of Primary Industries, Victoria

BAW perspective: In its regulatory capacity, the Bureau considers the definition of ‘monitoring’ to be ‘assessment and recording’. The Bureau has a broad scope of responsibility for monitoring animals in research and teaching. From monitoring animal welfare at the animal house and project coal face, during inspections, to ‘monitoring the monitors’ when auditing AEC duties and meetings, there are various levels of assessment. In addition, the Bureau monitors the state-wide use of animals in scientific procedures with the collection and processing of the State statistics, field-work notifications and indirectly with involvement in the revision and development of mandatory codes of practice.

With a more proactive perspective, the Bureau aims to promote careful and regular monitoring of animals involved in scientific procedures and the refinement of the use and care of these animals on a current and futuristic basis. So how can we do this ?

1. Provision of Feedback from BAW inspections – some common findings during BAW inspections. [(x.x) = reference section in draft code].

- Inconsistent standard or level of monitoring and recording
- Investigators: Scientific Procedures - often good records. Welfare in general - poor records, yet inter-related
- Monitoring of populations vs poor monitoring of individuals / species specific behaviours etc.
- Lack of life histories - whole of life monitoring.
- Lack of monitoring post-procedural (3), post-apture (5.3.2) and new arrivals (4.3.1)
- Equipment that makes monitoring difficult e.g. microisolators
- Parameters and sites for monitoring e.g. Ammonia, Temp range - in room, in cage/microisolator
- Transfer of responsibility from investigator to AH staff/techs etc. often unclear, not documented. Who is responsible when?
- Lack of monitoring of GMOs - unintended / adverse effects
- Health (Welfare) whole of year reporting - often not considered - daily diary vs spreadsheet for overview, trends, auditing
- Lack of detailed consideration of MONITORING AND REFINEMENT in project applications to AECs
- **Overall: records and evidence of welfare monitoring are often poor / inadequate.**

2. Endorsing references of Monitoring in The NHMRC Code:

- to AECs - Section 2 of The Code and Promoting M & R including: Inspections of institutions, animal houses, emphasis of M & R in project application forms, annual reviews and approval of adequately trained investigators, reports to Institution and feedback to investigators.
- to investigators, teachers, animal house (AH) staff – carrying out M & R. Section 3 Code including specific procedures and end points/protocols etc., for example: “GM of animals”. Sections 3.3.55-62, “Induction of Neoplasia” Sections 3.3.64-3.3.67 and “Production of monoclonal antibodies” Section 3.3.68-3.3.69 (*refinement). Furthermore, the Bureau considers that training, coordination with AH staff and a proactive review of techniques, protocols, the 3Rs is imperative.

- to institutions - For example: Staff training and institutional promotion of M & R: i.e. developing “Monitoring Score Sheets”, info-sharing, humane end points, SOPs, pilot studies, trial design and statistical advice.

3. Proactive policy:

E.g.. GMOs and Cloned animals- anticipating the future. For example: institutional monitoring and recording of GMOs/ Clones. Raise concepts of a State database collection of adverse effects (as in reality lacking with OGTR- National Database). Greater monitoring/reporting of GMOs/clone animals is a consistent recommendation in relevant international reports.

4. Monitoring the system, and other.....suggestions welcome?

Monitoring: Who, Why and How?

Carol Ginns

Animal Welfare Officer, University of Melbourne, Victoria

Summary

What is a monitor, what do they do, why do they do it? What are the problems? Are there any solutions?

There are many ways of monitoring and many types of monitor but the underpinning motivation for monitoring, at all levels, should be the achievement of optimal animal welfare outcomes. In this presentation, I hope to summarise the who, why and how of monitoring and then to identify some of the problems experienced at The University of Melbourne. This workshop will, I hope, then be part of the solution.

What is a Monitor?

Monitor n

- A person who oversees or observes; one who observes or comments on a process or activity, especially in an official capacity to ensure that correct procedure is followed.
- A jointed nozzle used in hydraulic mining, which may be turned in any direction.

What do they do?

Monitor v.

- To guide as a monitor. *Obs. nonce-wd.*
- To observe, supervise, or keep under review; to keep under observation; to measure or test at intervals, esp. for the purpose of regulation or control.



What a Monitor is not!



Monitoring: Who does it? Why and How?

The Big Five

Leopards = Investigators



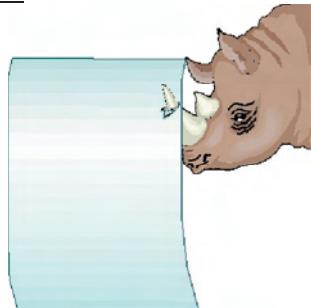
All of their senses are well developed and they are therefore extremely efficient hunters.

Elephants = Animal care staff



Are generally placid, but can be extremely dangerous if threatened.

Rhinoceros = Animal Ethics Committee



Have very poor eyesight, compensated for by their acute sense of hearing and smell.

Lions = Animal Welfare Officer



Have a wide habitat tolerance but because of their nomadic nature they are particularly vulnerable outside of conservation areas.

Buffalo = Bureau of Animal Welfare



Have a reputation for being the most dangerous of the five beasts. Much of this is based on reputation and relates to their response to being hunted. Nevertheless, all with whom they come into contact respects them.

Monitoring: Problems?



All

- Training
- Being and keeping informed

Investigators

- Workable reporting and recording procedures

Animal Care Staff

- Authority

Animal Ethics Committees

- Time and resources
- Remote sites

Animal Welfare Officers



Bureau of Animal Welfare

- Having realistic expectations

Monitoring: Solutions?



Monitoring: What not to do!



Monitoring animal welfare – an Animal Services Director’s perspective

Stephen Marshall

Director Animal Services, Monash University, Victoria

There are many interpretations of how to “monitor”. As I see it, this could be achieved successfully in relation to animal welfare and promoting refinement, by applying the following.

Monitoring housing conditions to ensure they are appropriate and ensuring basic husbandry practices are applied.

Development of enrichment strategies such as physiological and behavioural needs whilst discouraging uninformed enthusiasm.

Electronic reporting would encourage investigators to use the “best possible” practice, whilst assisting with the monitoring of animal health to determine what is sick and who should determine this.

We need to assist and encourage investigators, institutions and AEC’s with best practice in regards to husbandry and scientific applications. Revision of strategies can be achieved through measuring successes and preparedness to adopt change.

The empowerment of employees is very important and they should be encouraged to produce solutions, be creative and pass on their opinions. Training both externally and internally is a vital part of promoting refinement through development of SOP’s, internal skills portfolios and measurement of skill levels.

Monitoring animal welfare – a researcher’s perspective

David Taylor

Department of Pharmaceutical Biology and Pharmacology, Victorian College of Pharmacy, Monash University

Under the current National Health and Medical Research Council Australian code of practice for the use of animals for scientific purposes (NHMRC, 1997) and the revised code presently available for public consultation, monitoring is a significant consideration. A number of times throughout the code investigators are advised “to monitor their animals closely for signs of pain or distress”. To have a project approved a researcher must satisfy an Animal Ethics Committee that there are appropriate procedures in place to monitor the well being of the animals being used. This is not only during the experimental period but also during any periods of housing or transportation that may be necessary. Whilst the investigator accepts the responsibility for the monitoring they are often assisted by animal house staff and other animal handlers.

The well being of the animal is paramount in all cases. In experimental procedures in which disease states may be induced any possible discomfort and distress must be minimised. In addition if monitoring does reveal that something unexpected has happened then relief should be readily available. Investigators have a vested interest in the well being of all animals in their care.

Experience or training contributes to good monitoring. Unless the observer knows what the normal behaviour of the particular animal species is then a deviation from normal may not be detected. The measurements of body weight, food intake or fluid intake are useful aids but may be no better than observation of the animal’s behaviour. The position of the animal in their cage, how they respond to the experimenter and their appearance, for example the condition of their coat, to the experienced investigator are possibly more sensitive indicators of discomfort or distress than physiological parameters. Such qualitative observations should not be excluded in favour of quantitative measures. For example a change in the behaviour of a rat would occur earlier than the 10% reduction in body weight that some investigators use as an exclusion criterion.

Commitment to best practice also contributes to good monitoring. When an investigator advises that animals will be monitored continuously as they recover from anaesthesia it should mean just that. Whilst it is generally expected that the techniques used should be similar to or better than best medical and veterinary practice a lack of resources may mean that support staff are not always available. Consequently investigators themselves may be required to monitor and nurse animals during the post-surgery period.

As a consequence of closely monitoring animals investigators can refine their experimental procedures. Decisions about reducing the doses of agents used or the duration of treatments are informed by monitoring. This results in a reduction in the number of animals being used and in particular limits the number that may be distressed by an unexpected consequence of a particular treatment.

Monitoring animal welfare and promoting refinement – implications for wildlife studies

Catherine Meathrel and Bruce Robertson

Department of Environmental Management and Ecology, La Trobe University, Wodonga, Victoria

Summary

Wildlife research in Australia is, for the most part, still in its infancy. Many field biologists are still working on the basics of broadening the foundations of biological science. Often, the preservation of endemic species brings with it the need to control feral species. Recognition and refinement of humane, effective and target-specific pest control methods are critical to the preservation of much of Australia's biota. Far too little field-based research is conducted, and most of it is reactive rather than proactive.

In the 40 years since Russell and Burch proposed the three Rs for the use of vertebrate animals in research and training, a number of wildlife biologists have questioned their relevance for field-based research. Replacement is generally not an option in studies of wild populations as most of the research is species-specific. Reduction too, is often difficult to implement. This can be particularly problematic for those working on endangered species, especially when appropriate sample sizes are needed to generate meaningful results. However, the third R, refinement, must be considered in studies of wild populations. Refinement poses two major questions, 1) How do wildlife biologists monitor welfare to minimise pain/distress/disturbance?, and 2) Does this refinement involve an individual animal, or an entire population in the wild?

For the individual animal, welfare can be monitored using non-invasive observations of changes in physical appearance, behaviour. Conversely, we can use invasive techniques examining the organism's physiology, but this is limited by the lack of baseline data.

Stress to a population is much more difficult to monitor. Overt responses to investigator disturbance may include total desertion or changes in reproductive success. However, these may be naturally occurring phenomena, undetected by short-term, target driven research. Our studies of Short-tailed Shearwaters in Bass Strait (Australia's most abundant bird), conducted annually for the last 57 years, shows that reproductive success differs greatly between years and ranges from 20 to 80%, but does not differ between populations handled weekly, monthly or handled for the first time. Population modelling of the harvest of young has revealed that we should have been studying ten times more birds than we have monitored - an amazing 40,000 individual birds! Clearly, wildlife biologists studying endangered, endemic species do not have the luxuries of time, money and large sample sizes.

Field biologists must be aware of cost-benefit analyses for the populations they study. If evidence exists that studies have a greater detrimental effect on the population than the benefits of the knowledge to the population, then the research must be terminated. Clearly, this is a judgement call in the hands of the most experienced researcher. Whether or not this is left to the individual researcher may be contentious. It is the role of an independent, unbiased ethics committee to ensure that a field biologist is aware of, and attuned to his or her impacts on the species with which they work.

Session 4

Working group reports

Convenors summarise the conclusions and recommendations of their group

Chairperson: Denise Noonan
Animal Welfare Officer, Monash University

Working Group 1

Convenor: Magdoline Awad, Acting Chief Veterinary Officer, RSPCA

Topics discussed:

- National legislation for registration of researchers.
- Educating the public about animals in research.

Summary of discussion

LEGISLATION AND REGISTRATION OF RESEARCHERS - We proposed that perhaps on a national level that there could be some form of registration that was compulsory prior to being able to use animals in research. There would have to be a short course developed that dealt with legislation/ ethics committees and protocols in place regarding the use of animals in research. We thought that a National body could be set up to oversee this and that the institutions could be responsible for the registration. Making the institutions accountable for the research that is done would be the first step.

We also proposed that similar to driving tests that renewal of registration on a regular basis. This means that researchers will have to be up to date on new legislation etc.

There could be differing tests/registration for the wide variety of research being performed –WA and SA already do this.

Concerns were raised about the practical implications of individual registration of teachers, particularly in primary and secondary school settings.

EDUCATION - We all agreed that the basic education should start in primary school. At this time most children would already have been exposed to television programs and may have already started to form an opinion regarding the use of animals in research. We thought that a course for teachers in animal ethics at universities and institutions should be run but many believed that teachers already wore too many hats. The problem is that a lot of teachers at the moment are enforcing their individual opinions on their students at an early age where children are impressionable either through lack of education themselves or strong views. An education package delivered to schools is another option. Also there are many other education programs that schools could use - RSPCA mobile van in QLD is an example. PETPEP, designed by the AVA and teachers, is an education package that could be used as a tool. The continued education of students all the way through to the HSC was important and maybe can be a topic in science that a curriculum can be written in. We also propose that animal ethics be taught to all science students at university as these will later become the researchers!

A new curriculum can be drafted by teachers and a national body such as ANZCCART?

Working Group 2

Convenor: Jane Girling

Topics discussed:

- Whole-life monitoring
- Genetically modified organisms (GMO)
- Endpoints

Summary of discussion

Whole-life monitoring

Various people defined whole-life monitoring in different ways:

- (1) Long term field studies involving tagged animals – how does a researcher know what a tagged animal has ‘previously experienced’. Are long-term records made available to successive researchers?
- (2) GMOs – how long are GMOs monitored after birth? General characteristics often seem to be missing from phenotype reports, as opposed to details of specific issues linked to the clinical problem for which a transgenic animal may have been developed.

Specific problem: Animal breeding facilities that supply animals to researchers are not always completely willing to provide full details of the health status (genetics/virus/clinical history) of the animals being supplied.

GMOs

GMOs monitored via phenotype reports – see point (2) above. Animal house staff know about the more general characteristics of the various animals they look after – should they be contributing to the phenotype reports?

Endpoints

At what point should any particular experiment be terminated if problems are noted? It is a decision that can't be made in advance and is dependent on the type of experiment. The decision is obviously based on the daily monitoring of the animals. Again, the experience of animal staff is very important. The resources needed for extensive monitoring were also discussed.

CONCLUSIONS AND RECOMMENDATIONS

Whole-life monitoring

As a part of the license for animal breeding facilities, should facilities be expected to disclose all information about the animals being sold to the researcher?

The researcher does not have to purchase animals from suppliers if they feel the information provided is inadequate.

GMOs

Should animal house staff be contributing to the phenotype report?

Group members were strongly in support for animal house staff being represented on the Animal Ethics Committees (category E members).

Endpoints

No specific recommendations were made, but the important contribution of animal house staff was noted.

Working Group 3

Convenor: Deb Kelly

Topic discussed: “The Paper Work”

1. Introduction

Group 3 comprised all Animal Ethics Committee categories, administrative officers and State Government representatives. The issues considered by the group were:

- The paper trail in general
- The central issues of who does what and what is the cost and benefit
- Statistics
- Standard forms
- Is the Code too prescriptive?
- Monitoring protocols
- Should Category E (daily care) be mandatory on AEC's?

This report is a collation of their responses. Preparation of this summary required expanding on the notes taken at the workshop. Every endeavour was made to report the overall feeling of the group. However, in this fleshing out some explanation and organisation of those comments was required by the Convenor.

2. The Paper Trail

2.1 The Outcome

- Indirectly helps animals
- Provides accountability
- Keeps track of the numbers used, the status of colonies, their health treatment and fate

2.2 The Method

- The forms provide an interface between the researcher and the AEC
- In general, the forms tend to ask the questions required by the NHMRC
- They tend to concentrate on the techniques of a project not the ethical question of whether or not it should have been done in the first place.
- Often the questions are not clear and a response needs to be given in context describing the purpose
- The AEC's seem to struggle with the forms as much as the researcher, but they design them.
- Both the question and the answer need to be clear
- Often calling in the researcher is the simplest way to get clarification
- Repetition of detail, e.g. the technique used for an orbital bleed, gets tiresome.

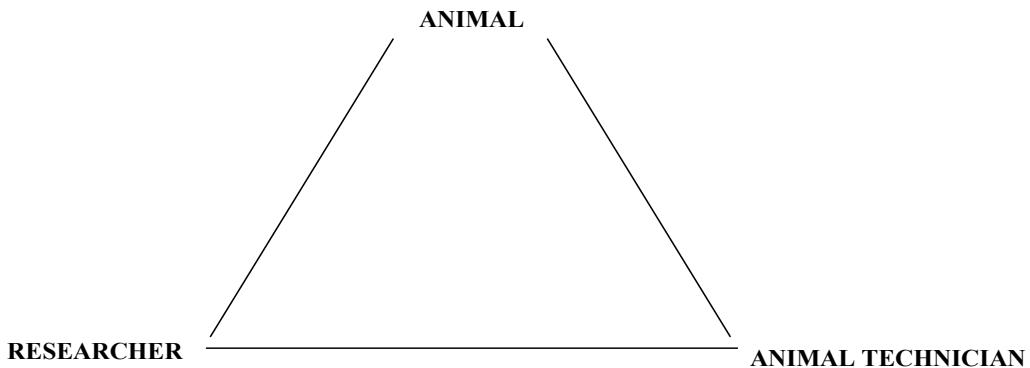
2.3 The Issues

- The sheer volume of the paperwork and its repetitious nature
- The forms are substandard, they should be helping researchers not confusing them
- Providing evidence and verification is time consuming

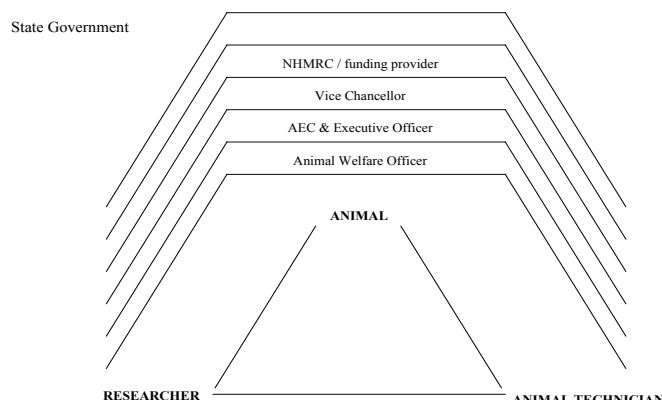
2.4 How could it be improved

- Improve communication as well as the forms
- There needs to be more face to face contact so the researchers, animal house staff and AEC all know each other and can approach each other without hesitation
- Model forms could be developed with the key issues, e.g. name of researcher, purpose etc. and these could be modified according to the needs of individual AEC's
- Training is important for both researchers and AEC's. Researchers must be answerable to the AEC and the AEC must be aware of life at the coal face.

3. General Comments re Paperwork



- Ultimately, the purpose of the whole system is to ensure that the animal is cared for properly.
- Centrally, this is a matter between the animal, the researcher and the animal house.
- If all three of these parties are content, productive and efficient, arguably there is no need for any of the rest of the system.
- Concentric circles seem to arise out of this relatively simple model.



- The further removed from the centre of that circle, the less impact the body is likely to have on the actual welfare of the animal, researcher and animal technician in the centre.
- Contact with animals and contact with paperwork varies according to the role.
- The group gave ballpark figures on the amount of time each party spent on paperwork and on actually caring for the animals and attempted to rank the importance of this work on the well-being of the animal at the centre.
- Clearly, these figures are extremely rough and the percentages vary in institutions, protocols and many other respects.
- In addition, most of the parties perform functions opt related to animal welfare (e.g. the Vice Chancellor) but to budgets, HR, OHSW and administrative functions which are essential to the running of a facility. These ballpark figures do not include those roles.

| Role | Animal Contact | Paper contact | Animal Benefit |
|-------------------|-----------------------|----------------------|-----------------------|
| Animal | 100% | Nil | 1 (enrichment) |
| Animal Technician | 75% | 25% | 2 (daily care) |
| Researcher | 60% | 10% | 3 (research impact) |
| AWO | 50% | 20% | 4 (monitoring) |
| AEC | 30% | 70% | 5 (approve, monitor) |
| AEC exec officer | 10% | 90% | 6 (audit, reporting) |
| Vice Chancellor | Nil | 5% | 7 (responsibility) |
| Funding provider | Minimal | 100% | 8 (approve, resource) |
| State Government | Minimal | 90% | 9 (oversight) |

4. Statistics

4.1 Relevance to Researcher

- Needs to know why and how animals are used so needs records for budgets and other planning purposes
- Only additional workload is recording animals used rather than just approved
- Allows for assessment of the numbers used and the species. This is an important consideration in the scientific agenda as well as animal welfare

4.2 Relevance to Animal House

- Breed to estimates of requirements so approval numbers essential
- Provides a checking mechanism on animal usage
- Even if statistics were not required, animal houses would have to collate them as part of good business management

4.3 Relevance to AEC

- Shows deviations between approvals and animal use
- Would have to collate statistics anyway, even if not a legal requirement

4.4 Relevance to State Government

- Necessary outcome of Senate Select Enquiry
- No budgetary or management benefit
- Double edged sword – whatever the figures criticism is inevitable
- Double standards apply – treatment of animals in routine management (e.g. mouse traps) would not be approved in a research context
- Purpose of statistics simply to comply with public expectation and provide national and international benchmarks

4.5 Issues

- Most of the paperwork from the institution's perspective would have to be done even if it were not a condition of licence.
- The purpose of statistical analysis should be made clear to researchers and animal house staff
- The services of bio-statisticians should be more commonly employed
- The State should use the figures more effectively, providing analysis of the type of research and the resources used (both animals and other)
- Should be used proactively to show the biomedical research being undertaken and the positive outcomes.

4.6 Benefits to the Animals

- The application and reporting process makes the researcher think about other methods. It provides a mechanism to challenge the scientific outcome and the validity of the procedure undertaken.

- Statistics make the animals more than a commodity like test tubes. The number of test tubes must be recorded for budgetary and accountability purposes. If not for the application process and reporting requirements, the animals used may be considered in the same manner as test tubes.

4.7 Conclusion

- Statistics are tied in with good research procedure and accountability.
- They are important and are under-utilised

5. Standard Forms

5.1 General Comments

- The forms must ask the right questions and be relevant to the institution and provide the right information for the AEC
- AEC's vary in their level of interest in various aspects of the applications. It should not simply be about the number of animals but about the purpose, benefits and cost.
- Applications should be easily transferable between institutions
- The core of the application should be standard with additional questions relating directly to the AEC and protocol.

6. Is the Code becoming too prescriptive?

6.1 General Comments

- General feeling of the group was that it isn't overly prescriptive
- The Code should be used as a guideline. There are always many advances in animal use and care so the aim should not be to provide the bare minimum required by the Code but to build upon it.
- Everyone has the opportunity of commenting on the requirements of the Code if they wish to do so.
- The Code does improve the welfare of animals in research and teaching. If some aspects are substandard or too prescriptive they can be changed at the next revision.
- Even if there is room for improvement in the Code, overall it's a good document and a useful guideline. The 95% that is right compensates for the 5% that is wrong.

7. Monitoring Protocols

7.1 Outcomes

- Ensuring that AEC requirements are met and the validity of results
- Training – ensures that researchers, animal house staff and the AEC are aware of different methods available and requires constant updates and improvements.
- Provides the opportunity for intervention if something is going wrong.

7.2 Methods

- Time consuming
- Can be costly

7.3 Issues

- Monitoring of remote sites problematic
- May be possible to liaise with another AEC for monitoring in some cases
- Also possible to ask an external person to report on the project (e.g. a local Police officer) but this generates problems of responsibility and ensuring the external person has the background to provide a valid report.
- Video links, photos and videotape all provide some opportunity for monitoring but not as useful as site inspections.
- There must be an assessment of likely cost, and likely benefit. Ultimately, there is a need for trust and tolerance.

7. Category E Membership of AEC's

7.1 Benefits / Advantages

- The Category E person knows what is happening in the animal house
- They have a knowledge of the animals
- They are aware of the research protocols that are to be considered by the AEC
- They are the most valuable person on the AEC
- Some AEC's will approve a protocol on the condition that the animal house staff oversees the work. Membership provides a feedback mechanism.
- The Category E member can easily provide feedback to the researchers
- Provides a mechanism to ensure that resource requirements can be met.
- Brings practicality into the discussions, e.g. it may not be possible to adequately house or provide for the species of choice so another species may have to be considered.

7.2 Costs / Disadvantages

- Consumes the time of animal house staff
- Depending on the level of training and confidence, the Category E person may be reluctant to enter into discussions
- If the institution does not have an animal house it would be inappropriate
- The animal house staff may be a considerable distance from the AEC resulting in practical problems.

7.1 Summary

- The Category E person is highly desirable on the AEC
 - The Code should mandate that if the institution has an animal house, a Category E person must be on the committee (9 for, 1 against)
-

Working Group 4

Convenor: Elaine Major

Topics discussed:

- Identifying monitoring issues
- Reporting by animal carers and researchers, and monitoring of such reporting

Identifying monitoring issues

Summary of discussion:

What happens when research is being carried out jointly between two institutes or when a researcher is working at an Institute other than where he is employed?

It should be the responsibility of the AEC where the work is being carried out to make sure they inform all the necessary parties.

Main conclusions and recommendations:

This should be a straightforward issue but would be made easier if:

- AECs were consistent
- AEC forms were standardised
- Minimum standards existed for animal facilities and animal husbandry practices
- There was more consultation between the main parties
 - Animal carers
 - Researchers
 - Management
 - AECs

Reporting by animal carers and researchers, and monitoring of such reporting

Summary of discussion:

The animal carers are required to report many aspects of their daily routine. Regularly monitoring by the Institution and the AEC occurs. There are forms relating to:

- SOPs
- Checklists
- Health records
- Animal arrivals and issues, deaths and culls etc.

The researcher is also required to report in particular:

Annual reports to the institution and AEC

Adverse effects of their research

End reports including discontinuation

Over the years many facilities have developed their own forms, checklists, reports. These are filled in automatically by researchers and animal technicians

All recording needs to be monitored. The problem is who carries out the monitoring, how is it done and what happens to the information.

Main conclusions and recommendations:

The main problem is that there are too many forms, reports etc. There is a real danger that all monitoring does not check that the forms have been filled out not that the information is correct.

Institutes feel that they have done 'their bit' if they have folders full of checklists most of which are meaningless. Much of the information cannot be analysed.

Many Institutes have 'factored out' researchers, their records, i.e. annual reports BAW returns etc. are completed for them and all they have to do is sign on the dotted line.

Finally, in conclusion, for reporting to be more effective the following issues should be addressed:
Researchers should receive education in:

- Animal Welfare
- Animal Husbandry
- AEC requirements

- so that they understand the impact these will have on their research.

Animal Technicians/carers should have direct access to the AEC and all AEC applications.

Category E membership should be mandatory.

Working Group 5

Convenor: Sue Peirce

Resources for monitoring have to be balanced with the risk of not monitoring.

A budget is required for monitoring – this should include includes animal care time, recording, animal nursing, animal health serology costs.

Amongst the tools required for monitoring are: checklists to focus attention on particular project monitoring, agreed endpoint documentation etc.

Routine or random visits by AEC, Bureau of Animal Welfare, RSPCA inspectors.

Monitoring the animal:

Extremely important to monitor animal following project approval – researcher is responsible, animal facility staff take on this responsibility because they are there observing/caring/treating etc. COMMUNICATION between the facility manager – animal techs – researchers – vet- animal welfare officer the crux of the monitoring. This communication is covered by:

- AEC application
- SOP's for procedures/ care/post operative monitoring
- Guidelines for animal house inspections,
- Policies for animal house

All of the above are monitored by AEC member inspections, facility vet, animal techs, animal facility manager, audits of project.

Monitoring the projects:

Justification of work monitored by AEC

Annual reports to AEC

Audit of researchers records

Importance of role of animal facility manager in making sure what is stated in proposal actually happens, advice on any changes to original protocol etc.

Training/Education for researchers must include:

NHMRC Code

Animal welfare laws for State

Importance of complying with Code

General discussion of Animal Ethics – use of animals in science privilege not a right

What is normal for animal species – behaviour, animal health, response to different situations etc.

What would be useful?

Monitoring sheets for health/ill health

Audio visual aids – video, photos etc. of normal

On-line chat line for scientists/animal techs/researchers easy to use – like Compmed

Important to develop supportive culture for researchers/animal techs and AEC's and BAW

One of the obstacles is the inconsistency of interpretation of code and process by AEC's

Main conclusions and recommendations

1. The structures/regulations exist for adequate monitoring (Code, guidelines, SOP's, proposals, AEC, animal facility staff, Bureau of Animal Welfare).
2. Only a small percentage do not fully endorse/understand the structures/regulations to safeguard animals and science.
3. Education/training for scientists, animal facility and vet staff, AEC members, is important – need to look at cost effective methods to achieve.
4. Important to develop supportive learning environment for all involved in using animals for research and training.

Session 5

Conclusions

Identification of further actions, setting tasks and goals

Chair: Margaret Rose

A summary of the conclusions and recommendations that emerged from the workshop is set out on pages 2 and 3 of this report.
