Slide 1

RED KITE
VETERINARY CONSULTANTS

Introduction to Ethics

1

Slide 2

Introduction

- What is Ethics?
- Discuss the use of animals
- Reason for and against the use of animals in research
- What makes animals appropriate for research
- Ethical frameworks
- ASPA and ethics
- Public opinion
- Suffering and how we can minimise this
- 3Rs
- Ethical group exercise (assessment)

2

Slide 3

LO: 2.1

Ethics – What is it?

Moral principles that govern a persons behaviour or the conducting of an activity

In layman's terms, the rules that help you make decisions on the rightness or wrongness of an action or inaction
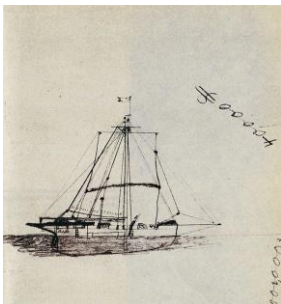
3

Slide 4

LO: 2.1

Words that can be associated with Ethics

- Integrity – the quality of being honest and having strong moral principles

- Morals – standards of behaviour; principles of right and wrong

- Principles – a fundamental truth or proposition that serves as the foundation for a system of belief or behaviour or for a chain of reasoning

- Character – the mental and moral qualities distinctive to an individual

- Rules – one of a set of explicit or understood regulations or principles governing conduct or procedure within a particular area of activity

- Truthfulness – the fact of being true; truth

4

Slide 5

LO: 2.1

The tragic last voyage of the "Mignonette"

5

Slide 6

LO: 2.1

The tragic last voyage of the "Mignonette"

- In 1884, the yacht Mignonette was purchased in England by an Australian businessman. He needed someone to sail it back to Australia and hired a crew of 4, 3 men and a cabin boy named Richard Parker.
- Off the coast of Africa, 700 miles from the nearest land, it sank. All 4 crew escaped into a lifeboat, but without much water or provisions.
- After 3 weeks adrift, they were all extremely weak. Richard Parker was in a coma and obviously dying.
- The 3 other men decided to implement the "Custom of the Sea", by killing him so that they might survive. He was killed and eaten by the others.
- The remaining crew were rescued close to death, about a week later, by a German vessel. When they arrived back in England some time later, they were very surprised to be charged with murder.

6

What do we use animals for?

Companionship	Pets – all species	15 million cats and dogs
Work	Dogs, horses, camels, yaks, cattle	
Clothing	Wool, fibres, leather, skins, furs	
Food	Meat, milk, eggs, (honey)	1 billion vertebrates 80kgs/head/year/UK
Sport	Hunting, shooting, fishing, racing	
Entertainment	Circuses, zoos, cock fighting	
Research	Biomedical science	4 million vertebrates

- UK Legislation exists to control all of these uses.

7

Reason for the use of animals in research

- They produce benefits:

- Human and animal health through medical discoveries
- Human safety through regulatory testing
- The environment
- Fundamental knowledge

8

Reason against the use of animals in research

- It is cruel – it is morally indefensible to cause suffering to animals

- It does not work – benefits to humans are slight as animals are not suitable models for human diseases

- It is unnecessary – any benefits could be obtained by the use of alternatives

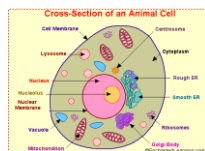- It de-humanises people and promotes cruelty to other animals and people

9

Why do you think animals are appropriate for use in research?

10

Why are animals suitable?

Research animals have similar:
- Cellular structure and processes
- Metabolism/physiology
- Body systems

Cross-Section of an Animal Cell

Ethical frameworks

People can be divided on the issue of Ethics so how do people decide what to do? Below are two ethical frameworks that can help people to decide.

Utilitarianism
- Action is justifiable if the most value for the greatest number of individuals is gained, i.e. the ends justify the means.
- Utilitarianism is a version of consequentialism, which states that the consequences of any action are the only standard of right and wrong

Deontology
- A set of rules should be followed
- Actions taken should be in accordance with rights, moral duty or obligation without regards to consequence or welfare of others
- Relies on moral principles of an individual or society

12

Slide 13

What ethical view does ASPA take?

Largely utilitarian (consequentialist)

- Requires a harm-benefit analysis of the programme of work to assess whether the harm that would be caused to animals (suffering, pain and distress), is justified by the expected outcome, taking into account ethical considerations and the expected benefit to human beings, animals or the environment

13

Slide 14

What ethical view does ASPA take?

BUT there are some deontological constraints

- It must be for a "Qualifying Purpose"
- There must be no alternative
- The use of the great ape species is prohibited (none in EU since 1999)
- Cannot test finished cosmetics or tobacco products

14

Slide 15

The Harm-Benefit analysis

- What are the costs, in animal harms?

- What are the benefits:
  - to humans
  - to animals?
  - to the environment?

15

Slide 16

Benefits
- Human Health
- Animal Health
- Human safety
- The environment
- Increase in knowledge

Harms
- Species & Numbers
- Breeding & Transport
- Nature/duration of procedures
- Husbandry & management
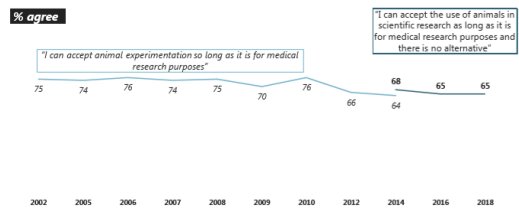- Method of euthanasia
- Wastage

16

Slide 17

Other factors that may influence the harm-benefit analysis

- Potential value of research
- Design of experiment
- Likelihood of achievement
- Use of the data
- Implementation of 3Rs

17

Slide 18

Public opinion

% agree

"I can accept animal experimentation so long as it is for medical research purposes"

"I can accept the use of animals in scientific research as long as it is for medical research purposes and there is no alternative"

75 74 76 74 75 70 76 66 64 68 65 65

2002 2005 2006 2007 2008 2009 2010 2012 2014 2016 2018

Attitudes to animal research in 2018
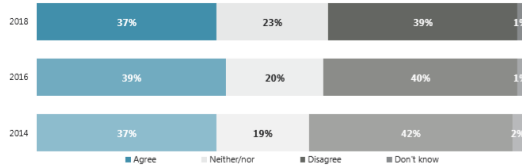A report by Ipsos MORI for the Department for Business, Innovation & Skills

18

Public opinion

It is acceptable to use animals for all types of research where there is no alternative

Year	Agree	Neither/nor	Disagree	Don't know
2018	37%	23%	39%	1%
2016	39%	20%	40%	1%
2014	37%	19%	42%	2%

■ Agree ■ Neither/nor ■ Disagree ■ Don't know

19

Public opinion

It does not bother me if animals are used in scientific research

Year	Agree	Neither/nor	Disagree	Don't know
2018	15%	18%	66%	1%
2016	22%	18%	59%	1%
2014	19%	20%	59%	2%

■ Agree ■ Neither/nor ■ Disagree ■ Don't know

20

Unavoidable versus avoidable suffering

- ASPA requires that suffering caused to animals is minimised – what is left is unavoidable suffering

- Avoidable suffering is not permitted under ASPA

- But – who determines what the baseline is?

21

How can we minimise the harms?

- PPL conditions

- The PPLh must:

- avoid unnecessary suffering
- use the minimum numbers
- use the animals of the least neurological sensitivity
- use procedures that cause the least pain and suffering
- use procedures that are most likely to produce satisfactory results

22

3Rs

<u>Russell and Burch – The 3Rs</u>
The principles of humane experimental technique (1959)

Replacement – substituting a living animal with a non-living item

Reduction – using the smallest number of animals needed to complete a study or project

Refinement – decreasing the number of 'inhumane' procedures that have to be performed to lessen pain and distress for an animal

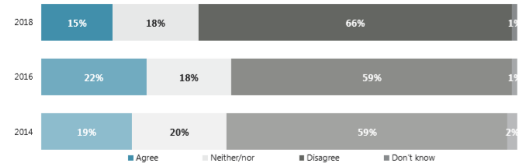- **Decide if these examples are either Replacement, Reduction or Replacement**

23

How ASPA encourages the use of the 3R's

- PPL application - sections on the 3R's

- Replacement

- Reduction

- Refinement

24

Animal Welfare

- **What is animal welfare?**
  - How an animal is coping with the conditions in which it lives.
  - An animal is in a good state of welfare if it is healthy, comfortable, well-nourished, safe, able to express innate behaviour, and if it is not suffering from unpleasant states such as pain, fear, and distress

- These are the 5 welfare needs or 5 freedoms.

25

Animal Welfare Act

- The Animal Welfare Act describes five welfare needs.
- These are:
  - for a suitable **environment** (place to live)
  - for a suitable **diet**.
  - to exhibit **normal behaviour** patterns.
  - to be **housed with, or apart from, other animals** (if applicable)
  - to be **protected from pain**, injury, suffering and disease.

26

Importance of good welfare

- Good animal welfare is important for both ethical and scientific reasons.

- Everyone working in this field has a responsibility to
  - maintain a respectful and humane attitude to animals,
  - identify and respond to ethical and animal welfare issues in their own work.

- Compliance with ethical principles may contribute to greater trust in animal research by the general public.

27

Questions

28

Replacement

THE 3Rs

The Secretary of State must assess how the programme of work complies with the principles of replacement, reduction and refinement. These principles are described in section 2A(2) of the Act.

Project proposals have to balance the greatest likelihood of generating satisfactory results, using the least number of animals and causing the least severe adverse effects.

Replacement
- Why is it not possible to achieve the objectives of your project without using animals?
- What alternatives have you considered and why are they not suitable? What alternatives will be used in achieving your objectives?
- What, if any, *in silico*, *in vitro* or *ex vivo* techniques will you use and how will they integrate into this project?
  (if not already covered in the project plan)

Ensure you have provided information to address each of the prompts above.

We will expect you to have researched the possibility of alternatives for your programme of work. There are databases and websites you can use and your AWERB and Named Information Officer should be able to help.

29

Reduction

Reduction
- What measures have been or will be taken to ensure that the minimum number of animals will be used in this project?
- Explain the principles of experimental design you will use and any sources of advice you will consult e.g. on statistics, experimental design
- How will you control sources of variability?

See prompts in box above.

Where appropriate, outline the **principles** of experimental design you will use at each stage of the work, and/or any sources of advice you will consult. Explain why you have chosen this experimental design. Why is it not possible to do it another way that uses less animals/earlier end points?

You may find it helpful to illustrate how you will follow the principles stated by outlining one or more experiments you will perform in this project. The level of detail provided should be sufficient for the inspector to understand:

30

Refinement

Refinement
- Explain your choice of animals, model(s) and method(s). Explain why they are the most refined for the intended purpose
- How will you minimise animal suffering while carrying out your work?
- Provide specific justification for any protocols categorised as 'severe'

See prompts in box above. You don't need to repeat information that is already in the project plan.

Surgery
Our expectation is that all recovery and long-term non-recovery surgery will be done aseptically (see HO Minimum Standards for Aseptic Surgery. See also other guidelines e.g. LASA Guiding Principles for Preparing for and Undertaking Aseptic Surgery http://www.lasa.co.uk/pdf/lasa_guiding_principles_aseptic_surgery_2010.2.pdf)

Analgesia
We also expect that peri-operative analgesia will be given and maintained after surgery for as long as is necessary to alleviate pain. It is helpful if you describe how you will monitor for pain and provide appropriate levels of analgesia – e.g. use of grimace scale, use of self administered analgesics

If you will not be using analgesia to control pain after surgery or other painful procedures which would normally require analgesia, you *must* make this explicit and explain why, scientifically, you cannot use analgesia. Also you must explain what other measures you will use to mitigate the effects of the procedures.

Choice of models and animals

31