



Online Ethics Center  
FOR ENGINEERING AND SCIENCE

# Survival Skills for Emerging Researchers

## Author(s)

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## Year

2000

## Description

A scenario about a researcher who is faced with making a decision after several dogs die in the course of his experiment.

## Body

Christopher Adams is just beginning his first totally independent research project as an Assistant Professor at a large biomedical research institution. This project is an outgrowth of the work he did as a postdoc. The project will examine the comparative efficacy and safety of two different types of bone implants with regard to their capacity to promote the healing of fractures. The study will be carried out in dogs.

Dr. Adams has submitted a protocol review to the Institutional Animal Care and Use Committee (IACUC) and has obtained IACUC approval of the study. Previous reports in the literature indicate that both implants are nontoxic. Twenty dogs are randomly assigned to either Group 1 or Group 2 and implanted with one of the two devices. After eight weeks, the dogs will be sacrificed and the bones will be tested. At six weeks, several animals in Group 2 die. The cause of death is unknown, but the

animals appear anxious and uncomfortable at the time of death. The time course of the experiment is almost up, and Dr. Adams wants to continue with the hope that at least some of the animals in Group 2 will live to eight weeks. As an alternative, he is considering sacrificing all animals at six weeks.

What scientific and ethical considerations are relevant to Dr. Adams' decision? With whom could Dr. Adams discuss his situation? (vet, past research supervisor, IACUC, others who use dogs in research.)

What are the pros and cons of continuing the study as written? What are the pros and cons of changing the protocol at this point?

Should the fact that the cause of the dogs' deaths is unknown play a significant role in his decision?

Should the discomfort of the animals at the time of their death play a role in his decision? How can we tell what their behavior means? Would it make a difference if the dogs were obtained through an animal shelter? (Note: Some states do not allow animals in shelters to be sold for research: check to see whether your state has such a law.)

Can you think of other choices that might be open to Dr. Adams?

If you were a member of an IACUC, what would you expect Dr. Adams to do?

Why would Dr. Adams do the study on dogs in the first place? How would you decide if this is a good model system?

## Notes

Caroline Whitbeck introduced methods and modules for discussing numerous issues in responsible conduct of research at a Sigma Xi Forum in 2000. Partial funding for the development of this material came from an NIH grant.

You can find the entire sequence on the OEC at [Scenarios for Ethics Modules in the Responsible Conduct of Research](#). Some information in these historical modules may be out-of-date; for instance, there may be a new edition of the professional society's code that is referred to in an item. If you have suggestions for updates, please contact the OEC.

**Contributor(s)**

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**Resource Type**

Case Study / Scenario

**Parent Collection**

Scenarios for Ethics Modules in the Responsible Conduct of Research

**Topics**

Animal Use

**Discipline(s)**

Biomedical Engineering and Bioengineering

Cell and Developmental Biology

Engineering

Life and Environmental Sciences

Microbiology

Physiology

Research Ethics

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