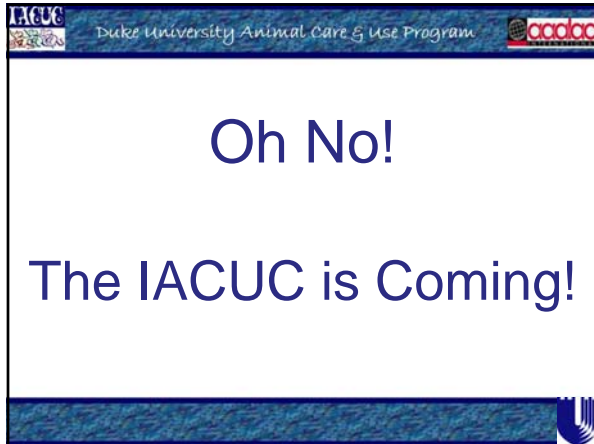


# Oh No! The IACUC is Coming!



IACUC Duke University Animal Care & Use Program aacub

## Oh No!

### The IACUC is Coming!

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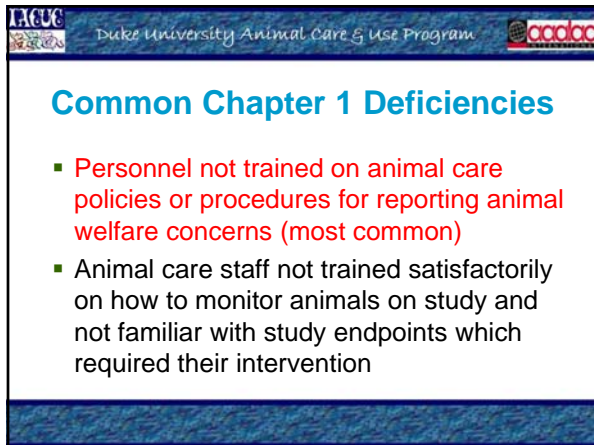
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IACUC Duke University Animal Care & Use Program aacub

### Common Chapter 1 Deficiencies

- Personnel not trained on animal care policies or procedures for reporting animal welfare concerns (most common)
- Animal care staff not trained satisfactorily on how to monitor animals on study and not familiar with study endpoints which required their intervention

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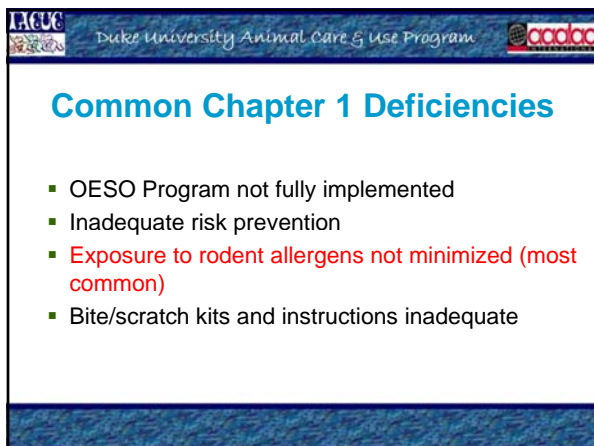
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IACUC Duke University Animal Care & Use Program aacub

### Common Chapter 1 Deficiencies

- OESO Program not fully implemented
- Inadequate risk prevention
- Exposure to rodent allergens not minimized (most common)
- Bite/scratch kits and instructions inadequate

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# Oh No! The IACUC is Coming!

IACUC Duke University Animal Care & Use Program 

## Animal Environment, Housing, and Management

- Primary enclosures constructed of appropriate materials, good condition, meet behavioral needs
- Space requirements being met
- Group housing where appropriate
- HVAC system provide necessary air changes, temperature, and humidity
- Light levels appropriate for species / husbandry



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IACUC Duke University Animal Care & Use Program 

## Animal Environment, Housing, and Management

- Husbandry
  - Feed quality and storage
  - Water quality and dependable delivery
  - Bedding quality and storage

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IACUC Duke University Animal Care & Use Program 

## Animal Environment, Housing, and Management

- Sanitation
  - Bedding and cage changing frequency
  - Cleaning of primary and secondary enclosures
  - Assessing effectiveness of sanitation

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IACUC Duke University Animal Care & Use Program 

### Animal Environment, Housing, and Management

- Pest control
  - Effective program
  - Monitoring live rodent traps
  - Rodent glue boards (NO!)
- Program for emergency, weekend, and holiday care

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IACUC Duke University Animal Care & Use Program 

### Animal Environment, Housing, and Management

- Population management
  - Animal identification can occur at various levels
  - Breeding colonies bring added requirements
    - Homozygosity in inbred strains
    - Heterozygosity in outbred stocks
    - Genotyping procedures (tail/ear snip, oral, etc.)
    - Record keeping
    - Tracking of animal numbers
- Structural and social environment considered for all species

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IACUC Duke University Animal Care & Use Program 

### Common Animal Environment, Housing, and Management Deficiencies

- No system/mechanism for ensuring effective sanitation program (most common)
- Overcrowded cages do not conform to Guide recommendations and no IACUC approved exception
- Enrichment is not being used as required

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# Oh No! The IACUC is Coming!

IACUC Duke University Animal Care & Use Program

## Common Animal Environment, Housing, and Management Deficiencies

- Inadequate frequency of sanitation (cages, racks, equipment, bedding changes)
- **Daily observations not performed on weekends or holidays**
- No system to alert personnel of abnormal environmental conditions after hours

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IACUC Duke University Animal Care & Use Program

## Veterinary Medical Care

- Surgery
  - Pre-surgical planning
  - Appropriately trained surgeon
  - Aseptic technique
    - Major vs. minor procedures
    - Rodent vs. non-rodent species
  - Use of expired medical products and drugs
  - Perioperative monitoring
  - Postoperative monitoring
  - Evaluation of surgical outcomes

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IACUC Duke University Animal Care & Use Program

## Veterinary Medical Care

- Pain, analgesia, and anesthesia
  - Personnel trained to identify signs of pain/distress
  - Procedures for using analgesics/anesthetics
- Euthanasia (AVMA Panel on Euthanasia)
  - Use of agent approved for species
  - Personnel trained in proper administration

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IACUC Duke University Animal Care & Use Program 

### Common Vet. Med. Care Deficiencies

- Clinical monitoring, reporting, and provision of veterinary care not sufficient to meet the needs of the animals (most common)
- Inadequate program for quarantine or stabilization of newly acquired animals
- Inadequate monitoring program for subclinical disease
- Aseptic technique not being utilized
- Inadequate follow up from suture/wound clip removal

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IACUC Duke University Animal Care & Use Program 

### Common Vet. Med. Care Deficiencies

- Inadequate perioperative and postsurgical monitoring
- Inadequate use of postoperative analgesics
- Other animals present during euthanasia
- Cervical dislocation used without anesthetic or scientific justification
- Incomplete or inadequate record of medical treatment and follow-up

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IACUC Duke University Animal Care & Use Program 

### Physical Plant

- Corridors
  - Guide says 6-8 ft wide is preferred
  - Must allow for movement of equipment
  - Floor/wall junctions easily cleaned



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IACUC Duke University Animal Care & Use Program

### Physical Plant

- Animal room doors
  - Open into animal room, ~42 x 84 in
  - Viewing windows?
    - Preferable with nonhuman primates
    - Light cycle considerations with rodents
  - Can open from inside without a key
  - Solid or sealed to prevent pest harborage
- Exterior windows
  - Acceptable in a few circumstances

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IACUC Duke University Animal Care & Use Program

### Physical Plant

- Floors
  - Moisture resistant, durable, sanitizable
  - Monolithic or minimal number of joints



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IACUC Duke University Animal Care & Use Program

### Physical Plant

- Drains and drainage
  - Performance standard: slope and size of drain sufficient to allow rapid removal of water
  - Traps kept filled or capped/sealed when not in use
  - Not essential in all rooms

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# Oh No! The IACUC is Coming!

IACUC Duke University Animal Care & Use Program

## Physical Plant

- Walls and Ceilings
  - Smooth, moisture resistant, sealed, free of imperfect junctions
  - Drop Ceilings?



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IACUC Duke University Animal Care & Use Program

## Physical Plant

- HVAC
  - Temperature: within range for species
  - Humidity: 30-70%
  - Air changes: sufficient to remove heat load and biological by-products (CO<sub>2</sub>, ammonia, etc.), general standard of 10-15 ACH
  - Relative pressure
    - Quarantine (Neg)
    - Surgery (Pos)
    - Procedure Spaces (Neg or Pos)
  - Regular monitoring



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IACUC Duke University Animal Care & Use Program

## Physical Plant

- Power and lighting
  - Alternative or emergency power
    - Should be adequate for species, climate, history
  - Time controlled lighting checked regularly
  - Ground-fault interrupted circuits in appropriate areas
    - Cagewash
    - Aquatic rooms or wet counter tops
  - Moisture resistant covers

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# Oh No! The IACUC is Coming!

IACUC Duke University Animal Care & Use Program

## Physical Plant

- Storage areas
  - Minimize storage in corridors/hallways
  - Bedding and food stored in separate area to prevent contamination
  - Human food and animal products stored separately
  - Refrigerated storage for carcass/tissue waste



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IACUC Duke University Animal Care & Use Program

## Physical Plant

- Noise control
  - Species susceptible to noise, such as rodents, located as far away from noise generators (e.g., Video screens, fans) as possible
  - Fire alarms
  - Intercom systems

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IACUC Duke University Animal Care & Use Program

## Physical Plant

- Surgery Considerations:
  - Surgical support
  - Animal preparation
  - Surgeon's scrub
  - Operating room
  - Postoperative recovery with appropriate environment
- Surfaces easily sanitizable
- Positive relative pressure (to surgical field)
- Appropriate support equipment for surgery, patient monitoring, and recovery (calibrated and monitored)
- Gas scavenging

NOTE: Four spaces required for non-rodents, while rodent, amphibian & fish surgeries require dedicated space ONLY WHEN PERFORMING THE PROCEDURE

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# Oh No! The IACUC is Coming!

IACUC Duke University Animal Care & Use Program

## Physical Plant

- Important rodent surgery concerns:
  - Animal transportation methods
  - Area clean and uncluttered, low traffic area
  - Surgical records reflect actual activity
  - Instrument sterilization methods
  - Patient preparation and aseptic procedures
  - Anesthesia monitoring
  - Gas scavenging
  - Carcass disposal

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IACUC Duke University Animal Care & Use Program

## Common Physical Plant Deficiencies

- Animal and/or support rooms were overcrowded, cluttered, or soiled (most common)
- Plastic rodent cages were cracked, crazed, and/or clouded
- No documentation of animal care and husbandry practices (animal rooms, cagewash, etc.)
- Inadequate system for identification of animals, or lacking pertinent information

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IACUC Duke University Animal Care & Use Program

## Site Visit Report

- The IACUC will designate each deficiency as minor or major/significant:
  - Oversight bodies define a significant deficiency as one that poses a threat to the health or safety of animals and / or health and safety of humans.

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IACUC Duke University Animal Care & Use Program 

### Follow-up Actions

- Reply to the IACUC Report quickly:
  - Develop an action plan that describes how deficiencies will be corrected, and a timeline for correction
  - Identify repeat deficiencies (An indicator of a failed lab culture?)

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IACUC Duke University Animal Care & Use Program 

### Follow-up Actions

- FOLLOW UP!
  - Keep IACUC informed of progress of plan, and when completion dates are not met
  - Ask for assistance and advice when you are not clear.

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IACUC Duke University Animal Care & Use Program 

### Helpful Site Visit Hints!

- Before the facility inspection
  - Familiarize lab staff with protocol
  - Do a Self Inspection (hand out)
  - Double check the animal care records
  - Double check the drugs
  - Double check anesthesia devices
  - Double check pain mgt plan
  - Confirm a current protocol is in the lab
  - Confirm 'THE GUIDE' is in the lab



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# Oh No! The IACUC is Coming!

IACUC Duke University Animal Care & Use Program 

## Helpful Site Visit Hints!

- Emphasize non-confrontational approach:
  - Remember: The reviewers are Duke staff
  - If you don't know – say so (guessing is not good)
  - Ask for advice / training
  - The IACUC will help you down the path toward success ...



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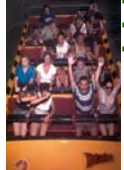
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IACUC Duke University Animal Care & Use Program 

## Helpful Site Visit Hints!

- Encourage positive interactions
  - Thank the site visitors (this is not their favorite thing either)
  - Don't take things personal – we are in this together!
  - Respond quickly to the 'issues' that are left with you
  - Be honest – be clear – be accurate



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IACUC Duke University Animal Care & Use Program 

## The 'Test'

We are a single IACUC Semi-Annual Facility Inspection Sub Committee. We are scheduled to visit the laboratory of Dr. Wool E. Bull who has a number of post docs working on understanding neurons that control the hitting of a ball. The goal of Dr. Bull is to develop a better home run hitting Durham Bull.

Our observations are as follows:

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# Oh No! The IACUC is Coming!

IACUC Duke University Animal Care & Use Program

**Test Question:**

Are there concerns with this situation? If so, what are the concerns?



IACUC

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IACUC Duke University Animal Care & Use Program

**Test Question:**

Are there concerns with this piece of equipment? If so, what are the concerns?



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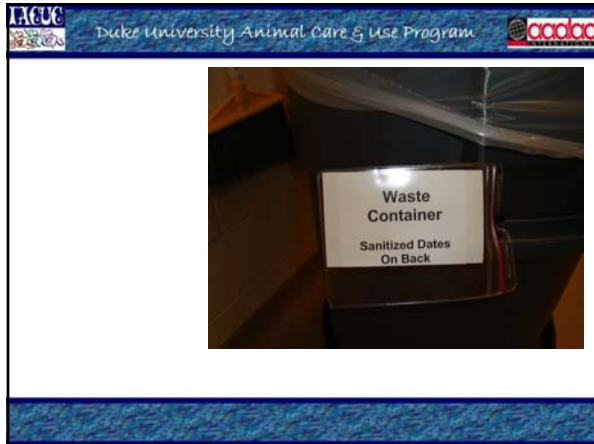
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# Oh No! The IACUC is Coming!



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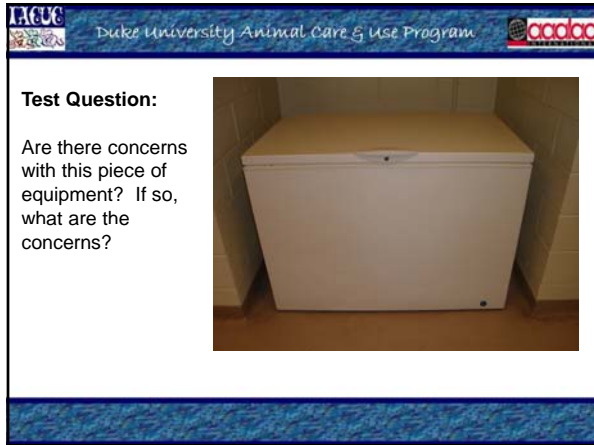
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**Test Question:**

Are there concerns with this piece of equipment? If so, what are the concerns?

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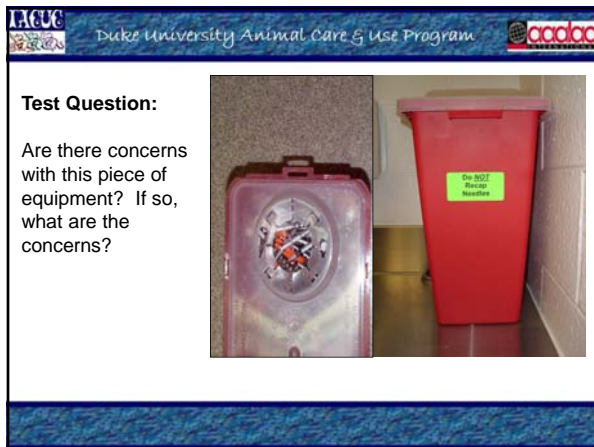
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**Test Question:**

Are there concerns with this piece of equipment? If so, what are the concerns?

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# Oh No! The IACUC is Coming!

IACUC Duke University Animal Care & Use Program

**Test Question:**

Are there concerns with this piece of equipment? If so, what are the concerns?



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IACUC Duke University Animal Care & Use Program

**Test Question:**

Are there concerns with this piece of equipment? If so, what are the concerns?



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IACUC Duke University Animal Care & Use Program

**Test Question:**

Are there concerns with this room? If so, what are the concerns?



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# Oh No! The IACUC is Coming!

IACUC Duke University Animal Care & Use Program

**Test Question:**

Are there concerns with this cabinet?  
If so, what are the concerns?



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IACUC Duke University Animal Care & Use Program

**Test Question:**

Are there concerns with this cabinet?  
If so, what are the concerns?



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IACUC Duke University Animal Care & Use Program

**Test Question:**

Are there concerns with this storage?  
If so, what are the concerns?



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# Oh No! The IACUC is Coming!

IACUC Duke University Animal Care & Use Program

**Test Question:**

Are there concerns with this storage? If so, what are the concerns?



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IACUC Duke University Animal Care & Use Program

**Test Question:**

Are there concerns with this device? If so, what are the concerns?



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IACUC Duke University Animal Care & Use Program

**Test Question:**

Are there concerns with this working space? If so, what are the concerns?



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# Oh No! The IACUC is Coming!

IACUC Duke University Animal Care & Use Program

**Test Question:**

Are there concerns with this storage? If so, what are the concerns?



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IACUC Duke University Animal Care & Use Program

**Test Question:**

Are there concerns with this broom? If so, what are the concerns?



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IACUC Duke University Animal Care & Use Program

**Test Question:**

Are there concerns with this tank? If so, what are the concerns?



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# Oh No! The IACUC is Coming!



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