Colorado Community Animal Response Training

Module 7: Overview of Animal Handling
Module 8: Hazardous Materials and Responder Safety
MODULE 7:
OVERVIEW OF ANIMAL HANDLING
Module Objectives: Animal Handling

1. Describe the basic physical and instinctive differences between prey and predator animals.

2. Describe key handling, transportation and safety issues in dogs and cats.

3. Identify key handling, transportation and safety issues for other common companion animal types.

4. Identify key handling and safety issues related to common livestock species.
Predators

Vision
- Binocular (both eyes used together)
- Depth Perception
- Tracking/Focus

Instincts
- Hunt
- Chase
- Kill
- Individual or Small Pack/Pride
Prey

Vision
- Wide Field
  - Maximum Field
  - Defense

Instincts
- Herd
- Escape
- Protect Young
Predator vs. Prey
Domestication

Breeding for compliance, trust, calm
◦ = selection against survival instincts

Predators: selection for non-dominant, juvenile behavior

Selection for food, fiber or work traits
Companion Animal Issues
Canine Body Language

Not the same as human body language

Some breeds harder to interpret
Calm/Relaxed Signs

No sustained direct eye contact
Ears relaxed
Tail wagging
Natural stance
  ◦ Not crouched
Small pupils
Happy/Playful

Wagging tail
Play bows
May bark and jump around
Canine Greetings

Normal Male Greeting

Submissive dog greeting another dog

Must allow time for canine formalities to proceed

Drawings courtesy of ASPCA
Fearful

Crouched (may roll over completely)
Tail tucked, ears pinned back
Hackles may be up
Whining/vocalization
Urination, defecation
Shaking, panting
Same signs as pain
Submission

Very important in K-9 social interactions

- Ears folded
- Inferior position
- No sustained eye contact
- Urination or even defecation
- On back for full submission

Full canine submission
Fearful and Aggressive

Fearful, but showing willingness to bite

Dangerous, but often can diffuse fear with calm, and very gradual approach
Aggression – Territorial, Protective, Possessive

- Eyes-locked stare
- Pupils dilated
- Erect ears
- Hackles up
  - Hair standing on end
- Growling/snarling
- Attacks are to front of body
- Dominant aggressive dogs will make very clear signals that about to attack

VERY DANGEROUS
Aggression – Fear, Defensive

If not an experienced handler, seek assistance
Don’t approach them without having help in the immediate area
Go slow
If possible, get them to come to you
Typically does not offensively attack-instead will make lots of noise (barking, growling)
Nip and run when back is turned
For Dogs Not Showing Aggression:

Don’t
- Stare at a dog
- Use a loud voice
- Move rapidly towards them
- Loom over them
- Grab them by the collar

Do
- Avoid prolonged direct eye contact
- Use a soft voice
- Turn sideways
- Make yourself smaller
- Use a slip leash
BSDR Technique

Bark - realize a dog is present
Stop - halt all forward movement. Do snapshot.
Drop your eyes so you are not staring.
Roll your shoulder so you are sideways to the dog.

This says “no fight” to the dog.
What am I thinking?
For Dogs Showing Overt Aggression

Call animal control or law enforcement
  ◦ Control stick (rabies pole)
  ◦ Chemical capture
  ◦ Lethal force may be justified in some circumstances

Amateur misconceptions
  ◦ “Dogs really love me”
  ◦ “I really relate to animals”
  ◦ “A dog would never bite me”
Restraint

Leashes
- Slip-type
- DO NOT USE LEASHES THAT ATTACH TO THE COLLAR
  - You may wind up holding a leash and a collar and chasing a dog
- Improvised leashes
  - Rope, baling twine, belts, or ????

Muzzles
Cats
Feline Body Language

Offensively threatening cats will show:
- Standing, rear higher than front, tail down
- Direct eye contact or staring
- Ears out to side of head
- Growls or hisses
- Salivating
- Claws/whiskers forward

Fearful cats will show:
- Crouched body posture or lying down
- Ears flat against the head
- Looks away or avoids eye contact
- Tries to get away or hide

Note: Cats do not exhibit submissive behavior
Normal Cats

Easiest when the owner is present

For Animal Search and Rescue (ASAR) teams

- May have a favorite hiding place
- Speak softly and move slowly
- See if they will come to you
- Tap a cat food can with a spoon
Unhappy Cats

5 POINTS of CONTACT

Weapons
- Four feet with multiple razors
- Mouth full of teeth
- Lightning speed

Cat bites almost always become infected
Out of Control Cats

Back off—allow to calm down if possible

Protective equipment
- Gloves
  - Double thick or armored
- Heavy Coat
- Eye protection

Fishing nets, blankets

Traps, cat grabbers

A job for professionals
Handling Cats

Scruffing
Back legs
Nets
Pillow case
Towels
Shoe Boxes

The less handling the less stress.
Other Species

Birds, reptiles, amphibians, ferrets, rabbits, rodents, etc.
- Many are temperature sensitive
  - Can’t get too cold or too hot
- Many are stress sensitive
- May be difficult to handle
- May be dangerous
Companion Animal Transportation

Pet carriers
- Cats
  - Pillow cases
  - Boxes with air holes
- Dogs
  - Leashed

Don’t mix animals together
Watch for heat stress
Livestock Handling
Equine Handling Methods

Horse Techniques
- Control the head
- Use a halter/lead rope
- Calm, soft voice
- Gentle strokes
- Stay close to the body
- No sudden moves
- Watch deadly zones

Losing your temper with horses and other livestock typically serves to make things worse
- Be smarter
- Be careful
- Be patient
Cattle Techniques

- Halter
- Lariat
- Panels/Alleyways
- Safety Fencing
- Herding
  - IF YOU CHASE THEM, THEY WILL RUN
  - Boots and a hat don’t make a cowboy
  - You need be smarter than those you are herding
  - Establish a plan before you act and everybody uses the same plan
Swine

Large swine
- Herding
- Panels/Alleyways
- Hog Snares
- Lariats (very difficult to use)
- Hearing protection concerns when working in close
Other Ruminants

Physiologically, a **ruminant** is a **mammal** of the order **Artiodactyla** that digests plant-based food by initially softening it within the animal’s first stomach, known as the **rumen**, then regurgitating the semi-digested mass, now known as **cud**, and chewing it again.

Llamas and Alpacas
- Usually halter broken
- Approach and handle more like horses than cattle and sheep
- Can spit when upset

Sheep and Goats
- Usually herd
- Small enough to restrain manually
Most Common Reasons for Injury

Some major causes of animal handling accidents are:
  ◦ fearful, agitated animals
  ◦ faulty equipment
  ◦ male aggression
  ◦ maternal aggression

Reducing fear improves both animal welfare and safety
Wildlife Issues

Colorado Department of Wildlife (CDOW) is the authority for wildlife issues

Support
- Rehabilitation Facilities
- Veterinary Hospitals

Only trained personnel, with permission of CDOW, should attempt to handle or transport wildlife

Photo by Lassi Kurkijarvi
MODULE 8:
HAZARDOUS MATERIALS AND RESPONDER SAFETY
Module Objectives

1. List the categories of weapons of mass destruction
2. Describe the basic categories of chemical and radiological hazards
3. Describe how to interpret a NFPA diamond hazardous materials warning placard
4. Describe the purpose of a Material Data Safety Sheet
5. Briefly describe animal decontamination
6. Describe the four levels of PPE
7. Briefly describe basic responder safety concerns
8. Briefly describe the potential mental health impacts of critical incident stress on responders and victims
9. Describe why cultural competency is important in dealing with incident stress
Weapons of Mass Destruction

Intentional use of CBRNE weapons:

Chemical
Biological (people, animals, crops)
Radiological
Nuclear
Explosive
Chemical Threats

Military chemical weapons (Poisoning)
- Nerve agents (AKA nerve gas)
  - Tabun, Sarin
  - Asphyxiation
- Vesicant or blistering agents
  - Mustard gas
  - Chemical burns
- Blood agents
  - Cyanide compounds
  - Absorbed into blood through inhalation or ingestion

Industrial/other chemicals
- Chlorine, phosgene, ammonia, nitric acid
- Pesticides

Other
- Methamphetamine by-products, mace, tear gas
Tokyo Subway Attack, 1995

Sarin (nerve agent)
AUM Shinrikyo group
12 deaths
990 treated
9000 in impact area

news.bbc.co.uk
NFPA Hazardous Material Diamond

This safety labeling guide graphically explains the National Fire Protection Association's Hazard Identification Coding System.
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Every company that manufactures or distributes hazardous chemicals in the United States must prepare a Material Safety Data Sheet (MSDS). Development of MSDS's was mandated by the Occupational Safety and Health Administration (OSHA) in their Hazard Communications Standard 29CFR 1910.1200. This standard is commonly referred to as the Right-To-Know Law. The purpose of this OSHA standard is "to ensure that the hazards of all chemicals produced or imported are evaluated, and that information concerning their hazards is transmitted to employers and employees. This transmittal of information is to be accomplished by means of comprehensive hazard communication programs, which are to include container labeling and other forms of warning, material safety data sheets (MSDS's) and employee training."
Radiological Threats

Industrial or medical accident

Event at a nuclear reactor or weapons facility

Intentional radiological contamination of food, water and the environment

Radiological dispersion device (RDD)

“Dirty Bomb” (combines radioactive material with conventional explosives)

Nuclear blast event
Radiological Agents

Radiation Source

Alpha Particles
Stopped by a sheet of paper

Beta Particles
Stopped by a layer of clothing or by a few millimeters of a substance such as aluminium

Gamma Rays
Stopped by several feet of concrete or a few inches of lead

Organic Tissue
Direct casualties

Companion animals
- Evacuation
- Decontamination
- Sheltering
- Animal search and rescue (SAR)
- Euthanasia

Livestock
- Decontamination versus euthanasia and disposal
- Food safety issues

Resource prioritization!
Radiation Protection Principles

**Time.** The shorter the time in a radiation field, the less the radiation exposure. Work quickly and efficiently. A rotating team approach can be used to keep individual radiation exposures to a minimum.

**Distance.** The farther a person is from a source of radiation, the lower the radiation dose. Do not touch radioactive materials. Use shovels, brooms, etc., to move materials to avoid physical contact.

**Shielding.** Although not always practical in emergency situations, shielding offered by barriers can reduce radiation exposure.
Decontamination

Vehicles and Premises

Two step process

- Cleaning
  - Visible debris, feed, manure, junk, etc.
  - Application of suitable disinfectant or detoxifying agent as needed

- Considerations:
  - Location
  - Corrosion
  - Environmental concerns (run-off)
  - Temperature/humidity (workers)
Decontamination Zones

- **WIND**
- **Cold Zone**
  - Safe area
- **WARM ZONE**
  - Evacuation and decontamination
- **HOT ZONE**
  - Incident
Animal Decontamination

Considerations

- Chemical, radiological, biological
- Susceptible versus non-susceptible
- Food animals versus companion animals
- Human health impacts
- Animal health impacts
- Resource availability
- Restraint, sedation

Euthanasia may be a reasonable decision in some cases
Decontamination Resources

HAZMAT equipment

Fire-fighting equipment

Food/agricultural operations may have decontamination equipment

Limiting factors:
  - Personal protective equipment
  - Trained responders
  - Supplies

wmdart.org
Personal Protective Equipment (PPE)

Equipment and training mandated by the Occupational Safety and Health Administration (OSHA) and other agencies

For all personnel who have a recognized risk of exposure to hazardous materials
General OSHA Requirements

Section 5(a)(1) of the OSH Act, often referred to as the General Duty Clause, requires employers to "furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees"

Section 5(a)(2) requires employers to "comply with occupational safety and health standards promulgated under this Act"
What is PPE?

Personal Protective Equipment (PPE) are articles worn or equipment used in order to protect wearer from recognized threats.

Provides a shield between you and agent

Must prevent/reduce exposure to airborne or surface agents

4 Levels listed by OSHA
Level A

Highest level of respiratory, skin, eye, and mucous membrane protection

Fully-encapsulated, vapor-tight, chemical-resistant suit

Chemical-resistant boots

Chemical-resistant inner/outer gloves

Coveralls, hard hat

Self-contained breathing apparatus (SCBA)

Level A protection is used for the most serious threats, where vapor and contact are both substantial hazards. Veterinary practices will probably never need level A protection in the course of normal clinical activities.
Level B

Highest level of respiratory protection
Lesser degree of skin and eye protection
Disposable chemical-resistant coveralls or fully-encapsulated, non-vapor-tight suit and self contained breathing apparatus (SCBA)

Level B maintains full respiratory protection, but with a lesser degree of vapor protection for the skin. Veterinary practices will probably never have a need for level B protection during normal clinical situations. In some cases, however, level B could be used by animal health emergency response personnel in an initial agro-terrorism investigation.
Level C

Lesser level of respiratory, skin, eye, and mucous membrane protection

Full face-piece or half-mask respirator

Powered, air-purifying, respirator (PAPR) or filter respirator

Chemical resistant clothing

Level C is similar to Level B, except that instead of supplied air, a powered air-purifying respirator is used for respiratory protection.
Level D

Ranges from a work uniform to basic biological barrier protections

Respiratory protection:
  ◦ None or dust mask

No vapor protection

Simple barrier skin protection

Note: Humans working in PPE can scare many animals

Level D is the type of protection that will be used in most veterinary practices and in many foreign animal disease emergency response incidents.
Risk Assessment

Risk assessments are the key to providing appropriate personal protective equipment during an animal emergency response.

Determine hazards
- Mechanical
  - Animal handling
- Noise
  - Kennels, swine
- Chemical
  - Disinfectants, pharmaceuticals
  - OSHA “Right to Know” requirements
- Biological
- Radiological
Basic Animal Health Bio-Protection

Barrier apparel
  ◦ Tyvek protective clothing, apron
  ◦ Footwear

Gloves

Head gear

Goggles

N-95 or better respirator when needed

Typically ranges from level C to D
Responder Health and Safety

If you don’t think you should.....**DON’T**

If asked to do something that you are not qualified for or think is dangerous....**DON’T**

**DO******

Find appropriate personnel and equipment
Seek appropriate supervision
Report to safety officer if unresolved
Critical Incident Stress Management

Responder Issues

- Physical, mental and emotional exhaustion
- Loss of clear thinking, flaring tempers
- Mental health professionals needed
- State or mutual aid support sooner
- Statewide critical incident stress resources
  - Denver: Mayflower CISM Team, 303-788-6889
  - www.cdphe.state.co.us/em/Resources/ResourceCISM.asp
  - Red Cross Psychological First Aid
    - http://www.redcross.org/co/denver/take-a-class/disaster-response-training
Animal Issues for Survivors

General emotional trauma
- Helplessness
- Emotional attachment to animals

Displacement
- Housing and care concerns

Loss
- Animals may be missing or status unknown

Death
- Human and animal
- Livestock depopulation impacts
Cultural Competency

Understand the communities in which you work

Learn the unique cultural features of the community and plan accordingly

- Language
- Traditions

Assume some people will be limited English speakers and have varying levels of literacy

Learn communication styles

1 in 7 U.S. adults are functionally illiterate
Thank you....

For more information contact Debrah Schnackenberg, Director Disaster Services Program at 303.539.7633 or debrahschnackenberg@petaidcolorado.org

Photo by Beverly Goodwin