Animals in the Hospital: Infection Control Considerations

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Acknowledgment

Dr. David J. Weber for sharing his original slides on this topic. His slides were the basis for my presentation to you today.

Overview

- Provide background on benefits of human-animal interaction
- Introduce The Society for Healthcare Epidemiology of America's (SHEA's) guidance document: *Animals in Healthcare Facilities: Recommendations to Minimize Potential Risks*
- Discuss diseases, conditions, and injuries that can occur from interactions with dogs
- Review animals in healthcare classification and recommendations by classification

Companion Animals in U.S. Households

- Overall, 66% of households own a pet (86.9 million households)*
- In 2017-2018, the percentage of households owning at least one**…
  - Dog: 38%
  - Cat: 25%
  - Bird: 3%
  - Horse: <1%
- Dog and cat ownership increased during the pandemic**
  - Percentage of households owning dogs increased to 45% by 2020
  - Percentage of households owning cats increased to 29% in 2022

*American Pet Products Association, Industry Trends and Stats (2023)
**American Veterinary Medical Association. U.S. Pet Ownership & Demographics Sourcebook (2017-2018; 2022)

Specialty and Exotic Animals

	Households	Population
	(in 1,000)	(in 1,000)
Ferrets	326	501
Rabbits	1,534	2,244
Reptiles	3,669	6,032
Pet Livestock	494	1,786
Pet Poultry	1,397	15,367
Other Mammals	1,978	3,521
All Others	322	961

American Veterinary Medical Association. 2017-2018 U.S. Pet Ownership & Demographics Sourcebook

Total U.S. Pet Industry Expenditures are Increasing

- 2021: $123.6 billion
  - Pet food and treats, $50.0 billion
  - Supplies, live animals, and OTC medications, $29.8 billion
  - Veterinary care and product sales, $34.3 billion
  - Other services, $9.5 billion
- 2020: $103.6 billion
- 2019: $97.1 billion
- 2018: $90.5 billion

American Pet Products Association, Industry Trends and Stats (2023)

The Human Animal Bond – A Brief History

- For millennia, humans have coexisted with companion animals
- Animals have held practical roles which have sometimes led to deep human-animal emotional connections

Dogs helping bird hunter. (Flickr)

Cats for pest control. (Flickr)

People using a horse and buggy. (U.S. Library of Congress)

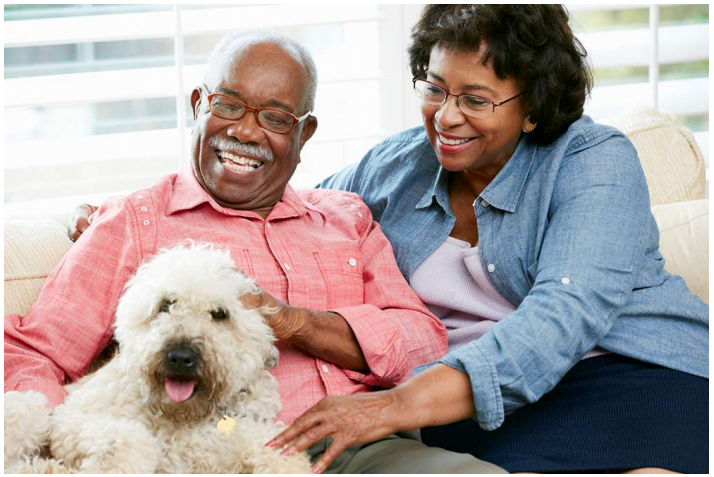
Common Roles of Companion Animals Today

Dog

- Companion
- Working, for example:
  - Herding
  - Guarding
- Service dog
- Animal-assisted activities (e.g., therapy)

Cat

- Companion
- Working (e.g., pest control)
- Animal-assisted activities (e.g., therapy)



People with their pet. *(CDC)*

Historical Perspective on the Therapeutic Value of Animal Contact

Among the earliest medical references of potential therapeutic value…

"*A small pet animal is often an excellent companion for the sick, for long chronic cases especially. A pet bird in a cage is sometimes the only pleasure of an invalid confined for years to the same room. If he can feed and clean the animal himself, he ought always to be encouraged to do so.*"

Nightingale, Florence. 1859. Notes on nursing: What it is, and what it is not.

Florence Nightingale Wellcome.
(Wellcome Library, London)

Benefits of Human-Animal Interaction

- Only in the past ~40 years has scientific research exploring the health advantages of this interaction been conducted
- Some documented human health benefits include:
  - Reduction in stress, depression, systemic blood pressure
  - Favorable lipid profiles associated with animal interaction
- Among adults and senior citizens, pets have been associated with improved health outcomes
  - Reduced cardiovascular disease risk
  - Improved psychological and physical well-being

People and Animals Interact in Healthcare Settings in Different Ways

- Animal-assisted activities
  - Pet therapy
  - Animal-assisted therapy
  - Other animal-assisted activities
- Service animals: As defined under the Americans with Disabilities Act (ADA)
- Personal pet visitation: Personal pet of a patient brought to the hospital to interact with that individual patient
- Animals in research: As approved by the facility's Institutional Animal Care and Use Committee (IACUC)
- Other
  - Aquariums
  - Medicinal leeches
  - Medicinal maggots

INFECTION CONTROL & HOSPITAL EPIDEMIOLOGY MAY 2015, VOL. 36, NO. 5

SHEA EXPERT GUIDANCE

Animals in Healthcare Facilities: Recommendations to Minimize Potential Risks

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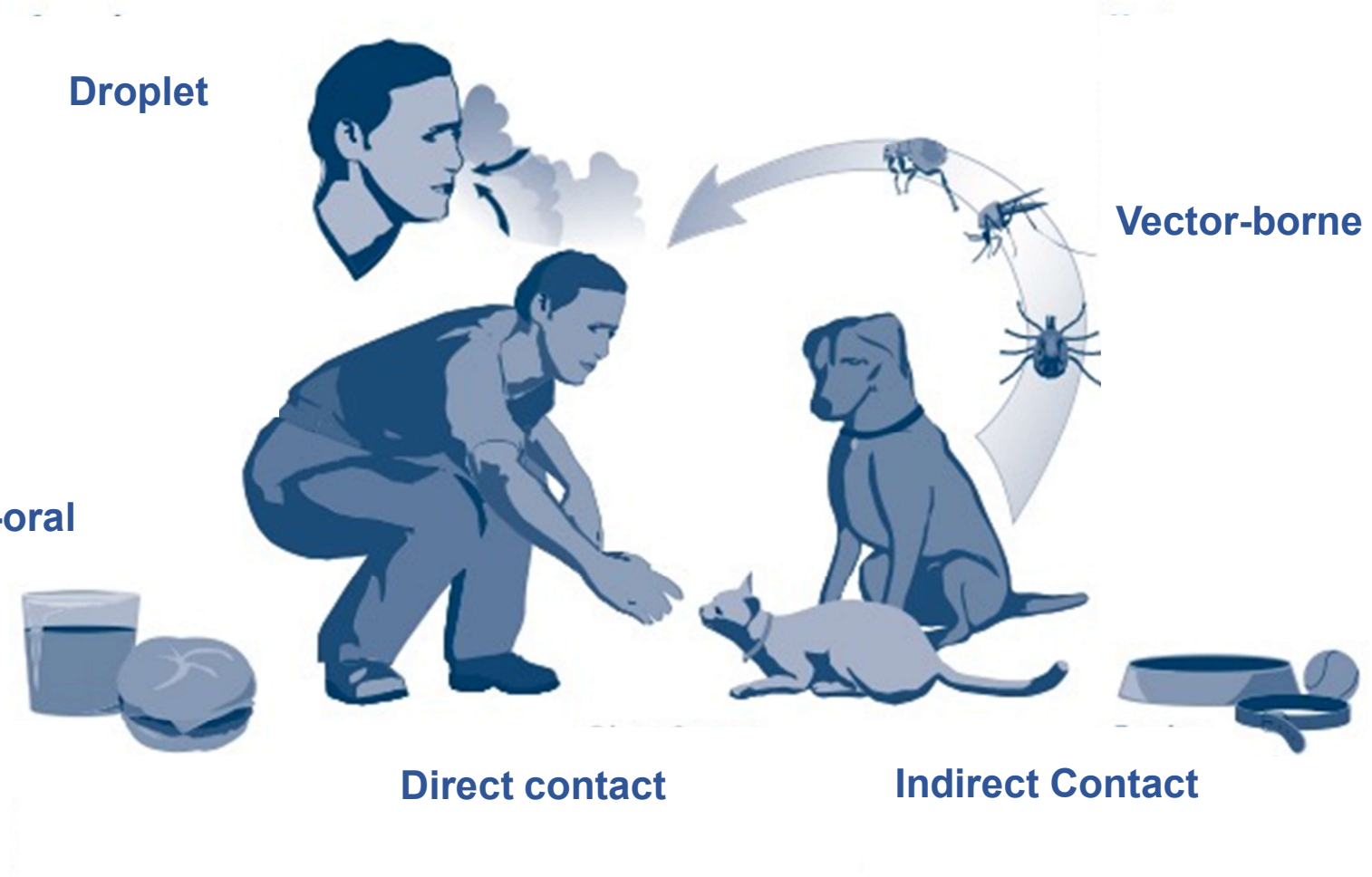
"*This document is intended to help acute care hospitals and ambulatory care facilities develop or modify policies related to animals based on their role*…" (i.e., animal assisted activities, service, research, personal pet).

Murthy, R., Bearman, G., Brown, S., Bryant, K., Chinn, R., Hewlett, A., . . . Weber, D. (2015). Animals in Healthcare Facilities: Recommendations to Minimize Potential Risks. Infection Control & Hospital Epidemiology, 36(5), 495-516. doi:10.1017/ice.2015.

Some Diseases, Conditions, and Injuries that Can Occur from Interactions with Dogs

- Trauma from bites and scratches
- Allergies
- Tick paralysis (animal passively carries ticks)
- Infestations (e.g., ticks, fleas, etc.)
- Infections

Zoonotic Disease Transmission



the Center for Food Security & Public Health
Iowa State University

Select Diseases Transmitted by Dogs

Transmission Route	Select Diseases / Organisms	
Direct contact (bites)	Rabies *Capnocytophaga canimorsus* *Pasteurella* spp. (*P. canis* most common)	*Staphylococcus aureus** *Streptococcus* spp. *Clostridium tetani* *Sporothrix schenckii*
Direct or indirect contact	Flea bites (*Clenocephalides canis*) Mites (*Cheyletiellidae, Sarcoptidae*) *Staphylococcus aureus**	*Malassezia pachydermatis* *Microsporum canis* *Trichophyton mentagrophytes*
Fecal-oral	*Campylobacter* spp. *Salmonella* spp. *Giardia duodenalis* *Cryptosporidium* spp. *Brucella canis*	*Strongloides stercoralis* *Ancylostoma ceylanicum* (hookworm) *Toxocara canis* (visceral larva migrans) *Taenia multiceps* *Yersinia enterocolitica*
Droplet	*Chlamydophila psittaci*	*Mycobacterium tuberculosis* (rare)
Vector-borne	Ticks (dogs passively carry ticks to humans) ▪ *Rickettsia ricksettsii* ▪ *Ehrlichia* spp.	Fleas ▪ *Dipylidium caninum* ▪ *Bartonella henselae*

*Including methicillin-resistant strains

Pathogens and Reported Outbreaks Related to Zoonotic Diseases in Healthcare Facilities (HCFs)

Author	Methodology	Findings
Lebebvre, 2006	**Healthy visitation dogs** (n=102) assessed for presence of zoonotic pathogens.	Zoonotic agents isolated from 80% of animals including: toxigenic *C. difficile* (40.1%), *Salmonella* spp. (3%), extended spectrum beta-lactamase or cephaloporinase *E. coli* (4%), *Pasteurella* spp. (29%), *Malassezia pachydermatis* (8%), *Toxocara canis* (2%), and *Ancylostoma caninum* (2%).
Scott, 1988	Epidemic of methicillin-resistant *S. aureus* (MRSA) on a **rehabilitation geriatric ward**	Paws and fur of a cat that roamed the ward were heavily colonized by MRSA. The cat was a possible vector for MRSA transmission.
Lyons, 1980	Outbreak of *Salmonella* Heidelberg in a hospital **nursery**	Outbreak traced to infected calves on a dairy farm where the mother of the index patient lived
Chang, 1998	An evaluation of a large outbreak of *Malassezia pachydermatis* in an **intensive care nursery**	Isolates from all 15 case patients, 9 additional colonized infants, 1 healthcare worker (HCW), and 3 pet dogs owned by HCW had identical patterns of restriction fragment length polymorphisms.
Mossovitch, 1996, Snider 1993	Multiple nosocomial outbreaks of *Microsporum canis* (ringworm) in **newborn nurseries or neonatal intensive care units**	Person-to-person transmission described; In neonatal intensive care unit outbreak, infection source (nurse) likely infected from her pet cat

Murthy, R. et al.. (2015). Animals in Healthcare Facilities: Recommendations to Minimize Potential Risks.

Animals as Carriers of Methicillin-Resistant *Staphylococcus aureus* (MRSA)

- MRSA colonized ward cat linked to outbreak in rehabilitation geriatric ward (Scott GM, et al. J Hosp Infect 1988;12:29)
- Household with MRSA colonized patient: 13.6% of households with pet had a colonized animal, 2/3 strains genetically linked (Morris D, et al. Zoonoses Pub Health 2012, epub)
- MRSA colonized human – companion animal colonized in 8.2% - concordent pulsed-field gel electrophoresis (PFGE) pattern in 75% (Ferreira JP, et al. PLoS One 2011;6:e26978)
- German turkey workers (37.3%) positive for MRSA (Richter A, et al. Epidemiol Infect 2012;epub)
- Spanish pigs colonized 85.7% - pig workers positive 9.3% - all isolates multilocus sequence type (MLST) 398 (Morcillo A, et al. Foodborne Pathogen Dis 2012;9:207)
- MRSA found in 1.2% of retail meat in Iowa (Hanson BM, et al. J Infect Pub Health 2011;4:169)

Animals and COVID-19

- There is no evidence that animals play a significant role in spreading SARS-CoV-2 to people
- Most animals with SARS-CoV-2 became infected after close contact with people with COVID-19
  - People with suspected or confirmed COVID-19 should avoid contact with animals
  - Additional research and surveillance data are needed to better characterize how SARS-CoV-2 is spread between people and animals

Animals and Mpox

- No pets or other animals were confirmed to have mpox during the 2022-2023 global mpox outbreak
- People with mpox could possibly spread the virus to pets through close contact:
  - Petting, cuddling, hugging, kissing, licking
  - Sharing sleeping areas
  - Sharing food
- People with mpox should avoid contact with animals

CDC. Mpox in Animals and Pets. Updated August 2023.

Animals in Healthcare Settings

- Role of animals in zoonotic pathogen transmission and human pathogen cross-transmission in healthcare settings is not well-studied
- Priority should be placed on:
  - Patient and healthcare personnel (HCP) safety
  - Use of standard infection prevention and control measures to prevent animal-to-human transmission

TABLE 8. Summary of Animals in Healthcare Classification and Selected Recommendations

	Animal-Assisted Activities	Service[a]	Research	Personal Pet
Program				
Written policy recommended	Yes	Yes	Yes	Yes
Federal legal protection	No	Yes	No	No
Animal visit liaison	Yes	No	IACUC	Yes
Infection prevention and control notification of animal visit/session	Yes	Yes	Yes	Yes
Infection prevention and control consultation for restricted areas	Yes	Yes	Yes	Yes
Visit supervised	Yes	No	Yes	Yes
Visit predetermined	Yes	No	Yes	Yes
Animal and handler/owner performs trained tasks	See text	Yes	N/A	No
Specially trained handler	Yes	Yes	Yes	No
Health screening of animals and handlers	Yes	N/A	N/A	No
Documentation of formal training	Yes	No	N/A	No
Animal can be a pet	Yes	No	No	Yes
Animal serves solely for comfort or emotional support	See text	No	N/A	Yes
Identification with ID tag	Yes	Not required	N/A	Yes/No
Animal required to be housebroken	Yes	Yes	N/A	Yes
Permitted animals				
Dogs	Yes	Yes	N/A	Yes
Other animals	See text	See text	N/A	See text

NOTE. IACUC, Institutional Animal Care and Use Committee.

[a]Policy to reflect ADA and regulatory compliance. Inquiries limited by ADA to tasks performed for patient.

Murthy, R. et al.. (2015). Animals in Healthcare Facilities: Recommendations to Minimize Potential Risks.

Animal-Assisted Activities

Background and Definitions

- Includes hospital visitation programs using specially-trained animals and their handlers (i.e., “pet therapy”)
  - Recreational and social purposes, or
  - Goal-directed interventions
- Different types of AAA
  - Animal-assisted therapy (AAT): Animals are part of specific treatment program
  - Animal-assisted education (AAE): Goal directed interventions to promote patient cognitive function improvement

Published Studies Have Demonstrated Benefits of AAA

Benefits:

- Improves psychological health
- Improves pain management
- Lowers blood pressure

Most studies are not scientifically rigorous but provide evidence of beneficial impacts on patients

AAA visit in the hospital. Source: U.S. Navy

General Recommendations for Facilities

Facilities should:

- Maintain a written AAA policy
- Have an AAA visit liaison
- Allow only dogs (no other animals) for AAA

Animals and their handlers should be:

- Formally trained and evaluated and present evidence of this
- Screened prior to being accepted

Consultation and education needs include:

- Infection control and prevention (IPC) should be consulted regarding facility locations and patient populations suitable for AAA
- All clinical staff should be educated on the AAA program

Training and Management of AAA Handlers: Policies and Training

Facilities should:

- Inform handlers of the facility's IPC and human resource policies and have them sign an agreement to comply
- Offer handlers all immunizations recommended for HCP
- Require every handler to have participated in (and provide certificate confirming) formal training which should include:
  - Standard precautions
  - Zoonotic diseases
  - Disposal of animal waste
  - Cleaning of contaminated surfaces
- Require that all handlers observe standard occupational health practices
  - Self-screen for communicable disease symptoms (e.g., cough, fever, diarrhea, conjunctivitis, rash)
  - Refrain from providing AAA services while ill

Training and Management of AAA Handlers: Visit Session Logistics

Facilities should:

- Require handlers to escort their dog to destination (arranged by facility AAA liaison, following hospital policy)
- Instruct handlers to restrict contact of their animal to patient(s) being visited (i.e., avoid casual contact with other patients, staff, the public)
- Require handlers to maintain control of their dog while on the premises (e.g., keep dog leashed, avoid cell phone use)
- Require handlers to manage their visits
  - Approach patients from the side free of invasive devices
  - Ensure everyone practices hand hygiene before and after animal contact
  - Prohibit patient eating or drinking during animal interaction
  - Report inappropriate patient behavior
- Maintain an AAA visit log for potential contact tracing (rooms, persons visited)
- Limit visits to one dog per handler
- Restrict sessions to a maximum of one hour

Requirements of Acceptable Animals

- Require that dogs pass a temperament evaluation performed by a designated evaluator
  - Evaluated under conditions that might be encountered in the facility
  - Evaluators (at facility and at formal certification program) must have:
    - Completed an evaluating temperament course or certification process
    - Experience in assessing animal behavior and level of training
- Recommend observation by an AAA program liaison at least once in a healthcare setting before approval to visit
- Recommend reevaluation of dogs at least every 3 years
- Require reevaluation of dogs before returning after a >3-month absence
- Require handlers to suspend visits and have dog formally reevaluated whenever the animal is misbehaving

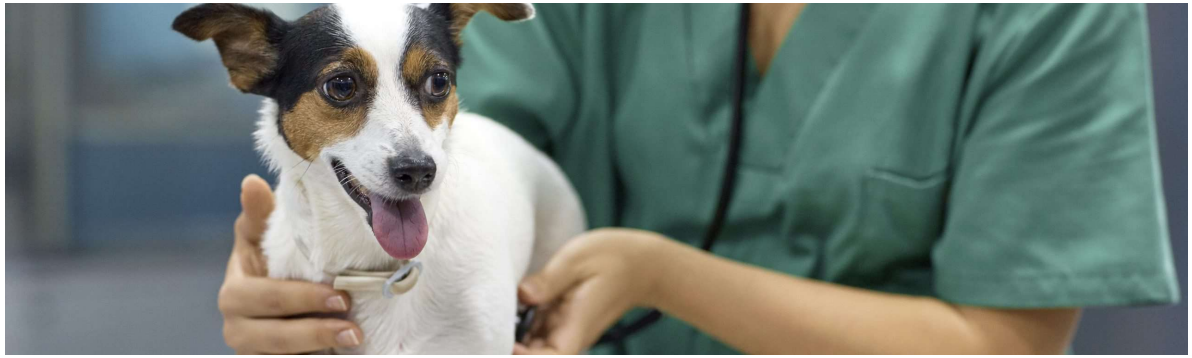
Health of AAA Animals

- Exclude animals with known or suspected communicable diseases or other concerning medical conditions
  - Including vomiting or diarrhea; urinary / fecal incontinence; sneezing / coughing of unknown or suspected infectious origin; ectoparasite infestation, open wounds
  - Until clinically normal or condition is managed
    - Veterinarian feels that it poses no increased risk to patients
    - Have received a written veterinary health clearance
- Exclude animals demonstrating signs of heat (estrus) during this time

Required Health Screening of AAA Animals

- Dogs must be vaccinated against rabies*
- Animals must have a health evaluation by a licensed veterinarian at least once (optimally, twice) per year
- Routine screening for specific potentially zoonotic microorganisms (e.g., group A *Streptococcus*, *Clostridioides difficile*, vancomycin-resistant *Enterococci* (VRE), MRSA) is not recommended

*As dictated by local laws and vaccine label recommendations. Serologic testing for rabies is not recommended.



Veterinarian performing physical exam. *(CDC)*

Before AAA Visits

Handlers should:

- Brush / comb the animal
- Ensure the animal's nails are short with no sharp edges
- Bathe the dog (if malodorous or visibly soiled) with a mild unscented (if possible), hypoallergenic shampoo and allow the coat to dry prior to visit
- Visually inspect the animal for fleas and ticks
- Clean the animal’s carrier
- Maintain leashes, harnesses, and collars visibly clean and odor-free

During AAA Visits

Handlers should:

- Use leashes (no choke collars) that are non-retractable and 4 to 6 feet long
- Identify their dog as belonging to an AAA program (e.g., clean scarf, collar, harness, leash, tag, etc. readily recognizable by staff)
- Allow the dog to urinate / defecate immediately before entering facility (hand hygiene immediately after)

Managing Contact Between Animals and Patients

Facilities should:

- Obtain oral or written consent for the visit (and consider documenting this in the medical record) from:
  - Patient (or their agent)
  - Attending physician (ideally)
- Restrict animals from: ICU, isolation rooms, nurseries, areas with immunocompromised patients, ORs, pharmacy, sterile services, food preparation areas
- Handler should:
  - Notify caregiver (e.g., nurse, physician) of the animal visitation
  - Obtain oral permission from individuals in the room (or their agents) before entering
  - Prevent the animal from contacting sites of invasive devices, open or bandaged wounds, surgical incisions, non-intact skin, or medical devices
  - Discourage patients and HCP from shaking the animal's paw
  - Prevent the animal from licking patients and HCP
  - Prohibit HCP from feeding the animal treats

Other Management Issues

Contact tracing

- Develop a system that requires animal handlers to sign in when visiting
- Capture a permanent record of areas / rooms where animal-patient interaction has occurred

- Environmental cleaning
  - Practice routine cleaning and disinfection of environmental surfaces after visits

Service Animals

Background - The Americans with Disabilities Act (ADA)

- U.S. Federal law originally passed in 1990
- Disability: *a physical or mental impairment that substantially limits one or more major life activities; a record of such impairment; or, being regarded as having such an impairment*
- Service animals: *dogs* that are individually trained to do work or perform tasks for people with disabilities*

Service dog. (*U.S. federal government*)

*Exception for miniature horses that are housebroken and do not create safety issues

ADA.gov – Service Animals

Service Animals

Service animals are:

- Dogs
- Any breed and any size of dog
- Trained to perform a task directly related to a person's disability

Service animals are not:

- Required to be certified or go through a professional training program
- Required to wear a vest or other ID that indicates they're a service dog*
- Emotional support or comfort dogs, because providing emotional support or comfort is not a task related to a person's disability

*Can request but not require

ADA.gov – Service Animals

Examples of Service Animal Tasks

- A person who uses a wheelchair has a dog that is trained to retrieve objects for them.
- A person with depression has a dog that is trained to perform a task to remind them to take their medication.
- A person with PTSD has a dog that is trained to lick their hand to alert them to an oncoming panic attack.
- A person who has epilepsy has a dog that is trained to detect the onset of a seizure and then help the person remain safe during the seizure.

ADA.gov – Service Animals

Service Animal Versus Emotional Support Animal Under the ADA

- If the dog's mere presence provides comfort, it is not a service animal
- If the dog is trained to perform a task related to a person's disability, it is a service animal.

Example:

A dog has been trained to sense that an anxiety attack is imminent and to take a specific action to help avoid the attack or lessen its impact.

This is a service animal.

ADA.gov – Service Animals

Asking if a Dog is a Service Animal

You may ask:

- ✓ Is the dog a service animal required because of a disability?
- ✓ What work or task has the dog been trained to perform?

You are *not* allowed to:

- ✗ Request any documentation that the dog is registered, licensed, or certified as a service animal
- ✗ Require that the dog demonstrate its task, or inquire about the nature of the person's disability

ADA.gov – Service Animals

State and Local Governments and ADA

State/local governments can:

- ✓ Require service dogs to be licensed and vaccinated, if all dogs are required to be licensed and vaccinated
- ✓ Offer *voluntary* service dog registration programs

State/local governments can't:

- ✗ Require certification or registration of service dogs
- ✗ Ban a service dog based on its breed

ADA.gov – Service Animals

Developing a Policy for Service Animals at HCFs

- Must be compliant with ADA and state and local regulations
- Should include these statements:
  - ADA-consistent definition of “Service Animals” (i.e., only dogs, miniature horses)
  - Service animals are not pets (should not be approached, bothered, petted)
  - Service animals must be housebroken
  - List of locations where service animals are prohibited (and justification)
  - Patient / designated visitor (not the healthcare facility) is responsible for service animal care and ensuring the animal’s health
  - Visiting / residing in a HCF can increase an animal’s risk of acquiring certain pathogens
  - HCF assumes no liability for costs associated with a hospital-associated infection in the service animal

Addressing Service Animals that Accompany a Visitor to a Patient's Room

The HCF policy should state:

- Persons with disabilities who are accompanied by service animals can visit patients -- visitation must adhere to the facility's service animal policy and "visiting hours and regulations"
- Person with a disability and a service animal should check with the patient's primary care nurse before visiting
  - Assure that no patient in the room has allergies or other significant medical risks that would contraindicate being near an animal.
  - If another patient in the room has an allergy, other significant medical risk from animal exposure, or is fearful of the animal, other visiting arrangements must be made (e.g., visit in day room or waiting room).
- Service animals cannot visit other patients' rooms, dining rooms, or other public areas of the facility unless accompanied by the person with a disability

For Service Animals Belonging to Patients

The HCF policy should state:

- IPC should be notified when patients are admitted with service animals
- Patient must arrange to have the service animal fed, exercised, and toileted, without HCP involvement
- For patient assigned to a semi-private room, the roommate must be screened for clinically significant allergies to the service animal
  - If present, the patient with the disability or patient with animal allergies must be moved
  - Similarly, the patient or roommate must be moved if the roommate is fearful or otherwise disturbed by the presence of the animal

Addressing Miniature Horses in the Service Animal Policy

Miniature service horse.
(*The Guide Horse Foundation*)

Miniature horses

- Can be trained to do work or perform tasks for a person with a disability
- Are generally 24-34 inches tall (measured to the shoulders) and 70-100 pounds

When assessing whether a miniature horse should be permitted in the HCF, consider:

- Is it housebroken?
- Is under the owner's control?
- Can the facility accommodate its type, size, and weight?
- Will its presence compromise legitimate safety requirements necessary for safe operations?
- Who is assigned to enforce the policy (e.g., Legal)?

When Might a Service Animal Be Excluded?

- Exhibits aggressive behavior (e.g., snarling, biting, scratching)
- Is excessively noisy (e.g., howling, crying, whining)
- Cannot contain bodily excretions (e.g., not housebroken, vomiting, has diarrhea)
- Is reasonably suspected of being infectious or ill
  - Until evaluation by a veterinarian, and
  - Written certification by the veterinarian that the animal does not pose an increased risk to patients or HCP

Legal counsel should be consulted prior to exclusion of a service animal from a HCF.

If a Service Animal Tests Positive for SARS-CoV-2…

- Recommendations for monitoring, isolation, and movement restrictions are at the discretion of the attending veterinarian and the handler, in consultation with the responsible health official
- In accordance with the ADA, service animals must be permitted to remain with their handlers

CDC. One Health Toolkit for Health Officials Managing Animals with SARS-CoV-2. Updated July 2023.

Personal Pet Visitation

Background

- Definition: A domestic animal that is owned by an individual patient and is not a service animal and not an animal used for AAA
- Potential benefit: Strong bond with pet may enhance patient wellbeing
- Potential challenges:
  - Pets are *not* screened for behavior or health as are animals used for AAA
  - Owners / handlers have not undergone special training
  - Pets may interact with HCP, other patients, and visitors
- Situations where pet visitation might be considered include:
  - Terminally ill patient
  - Patient with prolonged hospitalization
  - Patient who has a close bond with the animal; healthcare team suspects that visitation could improve the patient's physical or mental health

Admittance of Pet Animals into HCFs

- HCFs should have a policy and an individual that oversees the program
- Generally, pets should be prohibited from entering the HCF, including pets of HCP, patients, and visitors
- Exceptions may occur when
  - Healthcare team determines that pet visitation might benefit the patient
  - Visitation can be performed with limited risk to the patient, other patients, and the HCF
- Patient and/or guardian of the pet should be informed of potential risks (and documented in the medical record)

Pet Visitation Differs from Animal-Associated Activities
(or Similarly Structured Activities)

- Risks from visitation by patients' pets may be increased because:
  - No formal training of the owner/designee, as with an AAA handler
  - Pets have not been temperament tested
  - Pets do not typically undergo the same degree of health assessment or exclusion practices (e.g., age) as animals used in AAA
- To determine degree of restriction, consider the patient's health, mental status, and prognosis, and animal-related factors (e.g., age)

Written Policy for Personal Pet Visitation

Should include the following:

- Approval to be obtained:
  - IPC
  - Patient's attending physician and nurse
- Document approval in the medical record, with these details:
  - The animal
  - The person responsible for the animal's transport and care
- Visitation should be restricted to dogs
  - At least 1 year of age and housebroken
  - Younger animals could be considered based on animal age and species, and potential patient benefits and risks

Written Information Should Be Provided to the Animal's Owner/Designee

This must specify:

- Approved date, time, and location of visitation
- Maximum duration of visitation (1 hour)
- Acceptable and unacceptable practices of the visiting animal (similar to an AAA visit)
- Pre-visitation requirements of the owner/designee (similar to an AAA visit)
- Animal's owner or guardian must constantly be supervising the animal
  - Prevent contact of other individuals with the animal
  - Promptly clean up any fecal or urine accidents that occur
  - Supervise the visitation process
  - Report any events (e.g., bite, scratch) to HCP

Generally, Personal Pet Visitation Should Not be Permitted for Patients…

- On contact or droplet isolation
- In an intensive care unit (ICU)
- Whose cognitive status could prohibit safe interact with the pet (unless patient will only see, not touch, the animal)
- Who have undergone recent solid organ or stem cell transplant
- Who are significantly immunocompromised

In some situations, exclusions can be reconsidered by IPC and clinical personnel based on the risk to the patient, others in the HCF or patient's household, and the anticipated benefits to the patient.

Pet Visit Logistics – Selecting a Site

- Best if outside the medical facility, consistent with facility rules for leaving the facility under proper supervision
- Conduct in a private room if outdoor visitation is not possible
- Obtain explicit permission from the roommate (or guardian) and their physician prior to arrival, if visitation must occur in a multi-bed room

In Preparation for and During the Visit, the Pet…

Should:

- Be taken directly to the visitation site, avoiding high traffic areas
- Be prevented from coming into contact with other patients or HCP
- Be transported in a carrier (when possible) or be on a leash (<6 feet)
- Be immediately removed if disruptive or exhibiting fearful or aggressive behavior (e.g., barking, snarling, biting) (notify program coordinator)

Should NOT:

- Be fed, given treats, or provided with water
- Be allowed to roam freely in the visitation area
- Be able to interfere with medical measures (i.e., not be able to damage IV tubing).

Other Considerations

- Patient must perform hand hygiene immediately before and after contact with the animal
- Pets of HCP should not be brought to a HCF unless:
  - Part of a formal animal-assisted activities program, or
  - For approved visitation of a patient who is a family member

Research Animals

Background

- In academic centers, clinical facilities may be requested for use by research animals (e.g., CT, MRI)
- Zoos or veterinary facilities may appeal for use of healthcare facilities to diagnose or treat sick or injured animals
- Acute care hospitals should have comprehensive policies and procedures to ensure patient and public safety while enabling safe, effective, and efficient evaluation and treatment of animals.
- Animals can be reservoirs / vehicles for infectious pathogens, for example:
  - Direct contact (bite or scratch): Dog/cat (*P. multocida*), primate (Herpes B), rodent (LCM virus)
  - Inhalation: *Coxiella burnetii* (Q fever), *Chlamydophila psittaci* (psittacosis)
  - Fecal-oral: *Salmonella* spp., *Campylobacter* spp., *Cryptosporidium* spp.
  - Vector-borne (ticks, fleas): RMSF

Before a Research Animal is Evaluated in a Human HCF…

- Principal investigator should submit a detailed protocol that is reviewed and approved by the facility's responsible individuals or committees (e.g., IACUC)
- The detailed protocol should address all relevant issues including:
  - When the procedure may be performed
  - Where the procedure is to be performed
  - What personnel will be involved
  - What personal protective equipment is required
  - What cleaning and disinfection practices will be required
  - What route(s) will be used to transport animals to and from the clinical area
  - Who is responsible for transporting the animal to the procedure area
  - Who is responsible for care and maintenance of the animal

Miscellaneous

Veterinary procedures:

- Whenever possible, animals should be treated in facilities specialized for animal care
- Expense of specialized equipment may preclude use solely for animals
- Occasionally, veterinary facilities or zoological institutions may wish to utilize human healthcare equipment or facilities

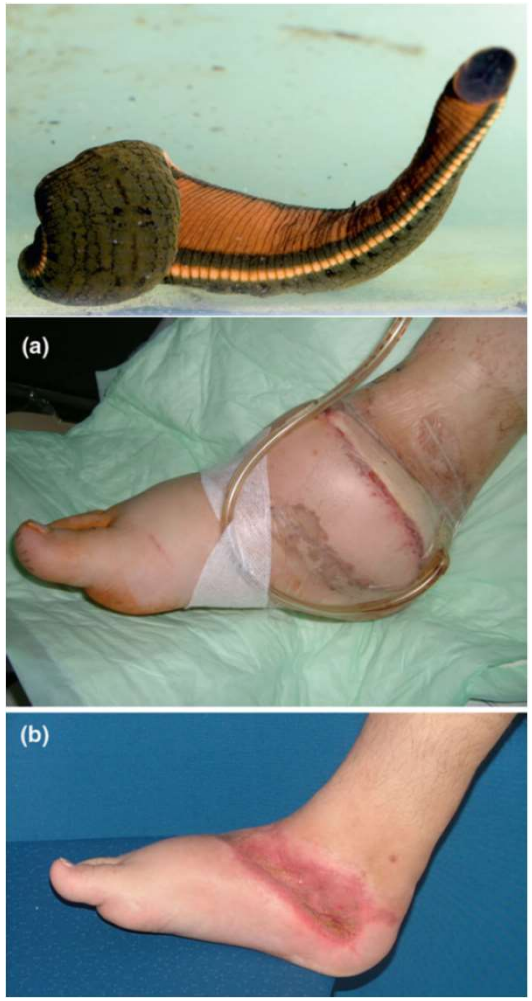
Zoo animals:

- Special care needs to be taken in the transport and care of zoo animals that are venomous (e.g., venomous snakes), large (e.g., elephant), or carnivores (e.g., tigers, lions).
- Zoo animals must be accompanied and contained at all times by trained staff.
- Contact of animals by HCP not affiliated with the research or clinical activity should be prohibited

Other Human-Animal Interactions in HCFs

Medicinal Leeches and Maggots

- Medicinal leeches
  - Purchase from medical supply vendor, maintain in pharmacy, and discard as regulated medical waste
  - Consider decolonizing leeches (i.e., eliminate carriage of *Aeromonas*) by feeding them on an appropriate antibiotic or prophylactically treating the patient
- Medicinal maggots for debridement
  - Purchase and use only appropriate decolonized flies or fly larvae should be purchased
  - Used maggots should be handled as biohazardous waste



Leech and *Aeromonas hydrophila* infection following use of medicinal leeches

Aquariums and Fish Tanks Should Not Be Allowed In Hospitals

Fish in a fish tank. (GetArchive)

- Risks of infection from maintenance of the fish tank
- Possible aerosol transmission of *Legionella* spp.

If a HCFs does have an aquarium or fish tank

- It should be covered and not accessible to patients
- Not located in clinical areas or areas with immunocompromised patients
- It should be maintained by a professional staff according to established protocols

Farm and Zoo Animal Events Should Not Be Allowed in a HCF or on HCF Property.

“Smiling” goat. (WallpaperUse)

Summary

- HCFs should have a policy regarding animals in their facility
- The ADA must be adhered to by law, and supersedes state or local laws and facility policy regarding service animals
- Animal assisted activities can be done safely if properly managed
  - Need to use specifically trained handlers and properly evaluated dogs
  - Need patient and physician approval
- Generally, pets should be prohibited from entering the HCF, but exceptions may occur
  - Healthcare team determines that pet visitation might benefit the patient
  - Visitation can be performed with limited risk to the patient, other patients, and the HCF

Some Resources and References

- Murthy, R., Bearman, G., Brown, S., Bryant, K., Chinn, R., Hewlett, A., . . . Weber, D. (2015). Animals in Healthcare Facilities: Recommendations to Minimize Potential Risks. Infection Control & Hospital Epidemiology, 36(5), 495-516. doi:10.1017/ice.2015.
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- Otto, C. M., Darling, T., Murphy, L., Ng, Z., Pierce, B., Singletary, M., & Zoran, D. (2021). 2021 AAHA Working, Assistance, and Therapy Dog Guidelines. Journal of the American Animal Hospital Association, 57(6), 253–277. https://doi.org/10.5326/JAAHA-MS-7250.
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Questions?