Dustin's Paw Assistance Dogs
Infection Control

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Basic Infection Control for Dustin's Paw Assistance Dogs*

1. We do not feed our working dogs a raw diet as uncooked meat can carry various deadly parasites and bacteria.
2. We practice good personal hygiene - hand washing after handling dogs and their toys. For those with known allergies in the facility, we have designated a dog free area. We can, also, wipe the dog's coat with a damp cloth to keep dander under control or we can have the dog wear a t-shirt depending on the severity of the allergy and recommendations of staff/parents.
3. We minimize our working dogs exposure to contaminated environments such as pet parks, high-traffic pet areas, irrigation ditches, streams/lakes/standing water and dirty kennels.
4. We remove our dog's feces daily from our yard and when out for walks. We never handle the stools without using a disposal tool or wearing disposable gloves or using a plastic barrier (poop sack).
5. Our dogs' potty on command. We potty them every 2-4 hours. This reduces the risk of an accident while working.
6. We use mosquito and tick abatement in our yard.
7. We visit our veterinarian for annual testing (fecal) and physical examination. See dogs' current tests and exams in this manual.
8. We use preventative flea/tick treatment like Heartgard/Interceptor monthly.
9. Our dogs' vaccinations are up to date. See current vaccination records in this manual.
10. We use only adult dogs who are Canine Companion for Independence Graduates www.cci.org and we keep our Assistance Dogs International Public Access testing up to date. See copy of permits in this manual. www.assistancedogsinternational.org/publicaccesstest.php See a sample of the test in this manual.
11. We do not allow our dogs to graze/vacuum or pick up food off the floor. Dogs should be feed food only from dog dish or from human hand.
12. We groom (brush coat, brush teeth) our working dogs daily, clip nails weekly and bathe our working dogs monthly.

*A working Assistance Dog has been bred, raised and trained for specific work. In the case of the Dustin's Paw dogs they are Canine Companion for Independence Assistance Dogs www.cci.org . They have been trained (by CCI and Diane Rampelberg) to execute interactive commands (85+) to captivate and entice patients to accomplish their therapeutic goals and objectives. The Dustin Paw dogs are working dogs. They work Monday through Thursday, 10 hour days with scheduled rest periods through the day.

Zoonotic Diseases

Zoonoses or zoonotic diseases are those diseases that can be transmitted directly or indirectly from animals to humans.

There are two types of zoonotic diseases of concern.

1. Illnesses that can be transmitted from dogs to humans.
2. Diseases that infect both people and dogs.

What kinds of zoonotic diseases do we need to be aware of here in Idaho?

Disease	Description	Prevention
Intestinal parasites	Giardia: Transmitted from host to host by ingesting cysts in contaminated feed, feces or drinking water. Symptoms include diarrhea, bloating, flatulence (farting), stomach cramps, fatigue and weight loss. Roundworms: While direct contact with infected dogs increases a person's risk for roundworm infection, most infections come from accidentally eating the worm larvae or from larvae that enter through the skin. For example, children are at risk for infection if they play in areas that may contain infected feces (such as dirt piles and sandboxes), and they pick up the larvae on their hands. Symptoms include abdominal pain, fever, gas, diarrhea,	Do not allow dog to drink water from unknown source – no streams or standing water outside. If dog is infected, do not allow dog to work with patients until released by a veterinarian. Do not allow patient to come in contact with dog feces or urine. Wash hands. Dog must have yearly fecal exam by a veterinarian. Administer monthly Broad Spectrum Parasiticide. Children should be discouraged from eating dirt and should not be allowed to play in areas that are soiled with pet feces. Sandboxes should be covered when not in use. Adults and children should always wash their hands after handling soil and after contact with pets. Shoes should be worn when outside to protect feet from larvae present in the environment, and raw vegetables should be thoroughly washed because they may contain parasites from infected soil. See your veterinarian if your dog has diarrhea, weight loss, increased scooting, a dull coat, or if you see worms under its tail, in its bedding, or on its stool. Dog droppings should be immediately picked up from public

	larvae in stool and vomiting. Hookworms: Hookworms can cause severe disease including anemia and serious diarrhea. Hookworms have either teeth-like structures or cutting plates with which they attach themselves to the wall of the intestine and feed on the dog/human's blood. Hookworms can cause a skin disease in humans called cutaneous larval migrans. Infections of the intestines in people can also cause a condition called 'eosinophilic enteritis", resulting in abdominal pain. Whipworms: Animals with whipworms pass the infection along to others when the worm eggs develop into larvae and are passed in their feces (droppings). Whipworms bury their heads in the lining of an animal's intestine and suck blood, but they are generally less harmful and usually do not cause health problems. Occasionally, severe infections can develop and lead to diarrhea, weight loss, and blood loss. Whipworm larvae rarely infect humans when they are	areas and from your yard to reduce the chances of contaminating the soil. Monitor and eliminate parasites in dog's environment. Put your dog on a flea prevention program with monthly applications of Frontline.

	accidentally eaten. Tapeworms: Dogs become infected with tapeworms when they eat infected fleas or lice. Tapeworms live in the small intestine and steal the nutrients from the food your dog eats. An infection is usually diagnosed when the eggs sacs are seen under the dog's tail or on its stool. These sacs look like flattened grains of rice. Rarely are tapeworms a risk to people. Coccidia: Coccidia parasites damage the lining of the intestine and the dog/human cannot absorb nutrients from its food. Bloody, watery diarrhea may result, and the animal/individual may become dehydrated because he loses more water in his stool than he can replace by drinking. Symptoms include symptoms watery diarrhea, weight loss, fever, abdominal pain, nausea and vomiting.	
Ticks	Lyme Disease: There is no evidence to suggest that infected dogs transfer Lyme disease to humans except as a reservoir of infected ticks that could bite	It is best to use one of the products that kills the ticks continuously. Frontline kills fleas and ticks effectively. The product should be applied on a monthly basis. Be very careful when removing an infected tick as you can get infected

	humans. Rocky Mountain Spotted Fever: Again, there is no evidence to suggest that infected dogs transfer Rocky Mountain Spotted Fever except as a reservoir of infected ticks.	at that time. Check your dog for ticks when in tick suspect areas and remove them before allowing dog to enter your home.
Fleas	Fleas are known to feed on human/dog blood and are disease carriers. Diseases such as Flea Allergy Dermatitis and tapeworms are known illnesses caused by flea bites.	Prevention is the best way to combat fleas from latching onto your dog and entering your home. Frontline kills fleas and ticks effectively. The product should be applied on a monthly basis.
Heartworm	Heartworms cannot be spread animal-to-animal; heartworms need a mosquito to complete their life cycle.	The best defense against heartworms is prevention. If you live in an area that has heartworm, a once a month chewable tablet will protect your dog from heartworm and other parasites.
Allergic Reaction	The proteins from the hair, saliva or urine of a dog can cause an allergic reaction that attacks the eyes and the airways of humans, like hay fever, and can result in asthmatic symptoms. It may also cause atopic dermatitis or a nettle rash.	Bathe dog at least once a month. Groom dog daily. Use disinfectant wipes on dog toys. Wash hands. Avoid touching eyes. Put a t-shirt on the dog. Limit petting and contact with dog toys.
Bites	All dog bites carry a risk of infection, but immediate copious irrigation can significantly decrease that risk. Assessment for the risk of tetanus and rabies virus infection, and subsequent selection of prophylactic antibiotics, are essential in the management of	Working Assistance Dogs should be stress tested, well trained and handled. They should be tested on a regular basis by a qualified organization/trainer. Canine Companions for Independence uses the Assistance Dog International Standards www.assistancedogsinternational.org Handler must never put a dog in a position where the dog feels threatened along with keeping the

	dog bites as well as human bites.	dog healthy, well trained and exercised.
Rabies	Rabies is an illness that affects the central nervous system. It is transmitted to people from infected mammals via saliva/bites.	Rabies can be prevented by avoiding exposure to infected animals. Make sure dog is vaccinated against rabies. Keep the vaccinations up to date.

Studies on Infection Control and Animals in Health Care Settings

*The following was taken from DiSalvo, H. Who let the dogs out? Infection control did: Utility of dogs in health care settings and infection control aspects. Am J Infec Control 2006:34(5):301-307.

Few studies have been conducted regarding the negative impact of bringing animals into the health care setting. The majority of the literature that has been published regarding animals in a heath care setting has involved the positive aspects. Some studies have examined the potential risks and disadvantages associated with animal use in a health care setting. (Brodie SJ, Briley FC, Shewring J. An exploration of the potential riks associated with using pet therapy in healthcare settings. J Clin Nurs 2002; 11:444-56) These include patient phobias, allergies, bites, and the potential risks of zoonoses. (Brodie SJ, Biley FC. An exploration of the potential benefits of pet-facilitated therapy. J Clin Nurs 1999; 8:329-37 and Khan MA, Farrag N. Animal-assisted activity and infection control implications in a healthcare setting. J Hosp Infec 2000:46:4-11) Other detrimental aspects includes the risks of animal-caused injuries, such as scratches or other trauma that can occur and affect infection control and risk management.

Allergies can occur in both the patients and staff in the health care facilities. Individuals may be allergic to the saliva, dander, or excretions of the animals. (Duncan SL APIC State-of-the-Art Report: the implications of service animals in health care settings. Am J Infect Control 2000;28:170-80) The coordinators of these animal programs need to be aware of the potential allergies and which patients are sensitive. Appropriate action should be taken (ie, grooming and bathing the animal and providing areas within the healthcare facility where animals are excluded) before arrival at the health care facility to minimize allergic reactions in those susceptible. (MMWR. Guidelines for environmental infection control in health-care facilities. Recommendations of CDC and the Healthcare Infection Control Practice Advisory Committee (HICPAC) 2003; 52(RR-10);92-6)

Although bites are a potential for concern when working with animals, they do not usually pose a major threat. One potential concern after an animal bite is the possibility of the transmission of the rabies virus (a rhabdovirus of the genus Lyssavirus), a disease that is almost invariably fatal without appropriate treatment. An immune globulin is available as postexposure prophylaxis but must be given as soon as possible after the animal bite. According to Hoff et al, most animal bites only produce minor injury. However, infection of the wound with numerous types of bacteria is a potential complication. Of particular concern is the potential for a high mortality rate from an infected animal bite among the immunocompromised population. (Hoff GL, Brawley J, Johnson K. Companion animal issue and the physician. South Med J 1999:92:651-9)

A zoonosis refers to an infectious disease that can be transmitted from animals to humans under normal circumstances. There are more than 200 zoonotic diseases. For example, tinea, a fungal infection of the skin, can be spread from dogs or cats to humans This

infection is caused by species of Microsporum and Trichophyton and also by Epiudermophyton floccosum.

Those at high risk of contracting a zoonosis include elderly adults, pregnant women, young children, and immunocompromised individuals.

According to one group of researchers, children seem to be at higher risk for animal-related illnesses because of a combination of immunologic reasons and behavioral factors. (Robertson ID, Irwin, PJ. Lymbery AJ. Thompson RCA. The role of companion animals in the emergence of parasitic zoonoses. Int J Parasitol 2000:30:1369-77) For example, children are likely to forget to wash their hands after contact with the animal. This could potentially spread a zoonotic disease. Infants, because of their naïve immune systems, are also very susceptible to zoonotic diseases.

Immunocompromised individuals must be careful when in contact with animals because they are more susceptible to certain agents, such as *Salmonella* species, *Campylobacter* species, *Giardia lamblia*, and many others. *Campylobacter* species can be passed from infected puppies and kittens to susceptible individuals through contact. Animals that have diarrhea are particularly important in the transmission of *Campylobacter* species. Pets with diarrhea can be treated with erythromycin to rid the animal of the infection. Domestic animals, including dogs, can also carry strains of other enteric pathogens that are pathogenic to humans. (Robertson ID, Irwin PJ. Lymbery AJ. Thompson RCA. The role of companion animals in the emergence of parasitic zoonoses. In J Parasitol 2000;30:1369-77)

Although zoonotic diseases can be passed by many different animals, dogs are the main concern in a health care setting. However, according to a survey performed by Grant and Oslen, dogs were viewed as having the lowest risk of transmitting a disease to humans by both physicians and veterinarians. (Grant S, Olsen CW. Preventing zoonotic diseases in immunocompromised persons: the role of physicians and veterinarians. Emerg Infect Dis 1999;5:159-63)

There are many ways to reduce the risk of transmission of a zoonotic disease. Implementing effective hygienic measures to prevent transmission (such as hand washing) is a key way to avoid the transmission of a zoonotic disease. Early detection of a zoonotic disease is essential in preventing transmission of the agent to humans, demonstrating the importance of regular evaluation by a veterinarian. (Guay DRP. Pet-assisted therapy in the nursing home setting: potential for zoonosis. Am J Infec Control 2001:29:178-86)

According to Khan and Farrag, animals can become carriers (or vectors) of potentially infectious human pathogens and may be responsible for cross infection as well as other humans (health care workers) we might add. Therefore, "animals should not be allowed to visit with patients who are infected or colonized with tuberculosis, Salmonella, Campylobacter, Shigells, Strepotococcus group A, methicillin-resistant *Staphylococcus aureus* (MRSA), dematophytes, Giardia, or amebiasis." (Khan MA, Farrag N. Animal-assisted activity and infection control implications in a healthcare setting. J Hosp Infec 2000;46:4-11) A list of potential bacterial, viral, parasitic, and fungal disease agents that can be transmitted from dogs to humans are

listed in Table 1. With careful planning, risk of transmission and cross infection can be minimized.

The benefits of animal involvement in the health care setting are greater than the risks. Animals can and do perform useful functions in hospital and clinical settings, and risks can be minimized while complying with legal requirements.

Much of the success of a program utilizing dogs in their healthcare facility is due to the strong involvement of professional handlers. The handlers assure the quality of the participating dogs and provision of goal-directed interventions as outlined by the staff.

* The following was taken from Brodie S, Bnurs F and Shewring M. An exploration of the potential risks associated with using pet therapy in healthcare settings. Journal of Clinical Nursing 2002; 11:444-456

It is unlikely that dogs pose a substantial threat of contamination to people involved in pet-therapy programs. The probability of the dog itself being infected is reasonable; however, with simple measures any risk can be virtually eliminated and the pet can be easily treated. Transmission to humans is possible, yet the chain of transmission is very weak and easily broken.

Allergy to animals is cited as one of the hazards arising from human-animal interaction (Barba B. (1005) A critical review of research on the human/companion animal relationship 1988-1993. *Anthrozoos* 8(1), 9-15). However, only 6% of people seen by allergists in North America have an allergic reaction as a result of animal dander (Elliot D., Tolle S., Goldberg L. & Miller J. (1985) Pet-associated illness. The New England Journal of Medicien 313(16), 985-995). Symptoms of animal allergy include nocturnal wheezy cough, asthma, rhinitis and conjunctivitis (Criep C.H. (1982) Allergy and Clinical Immunology. Grune & Stratton, New York.), and it is the dander, saliva, hair, urine and other secretions from animals which can become allergens (Schantz P.M. (1990) Reviews and research reports; preventing potential health hazards incidental to the use of pets in therapy. *Anthrozoos* 4(1), 114-23) Careful selection of the animal can reduce the risk of an allergic reaction: cats are the tope of the allergy-inducing hierarchy, followed by guinea pigs and horses (Schantz P.M. (1990) Reviews and research reports; preventing potential health hazards incidental to the use of pets in therapy. *Anthrozoos* 4(1), 114-23), but dogs and pet birds can also cause allergies (Marks M.B. (1984) Respiratory tract allergy to household pet birds. Annals of Allergy 52, 56-57) It appears that the incidence of pet-induced allergy can be reduced in a controlled environment, for example by obtaining accurate history from patients (Elliot D., Tolle S., Goldberg L. & Miller J. (1985) Pet-associated illness. The New England Journal of Medicine 313(16), 985-995), choosing the correct pet and by careful and regular grooming.

Animals can have a positive impact on the lives of their human compatriots (Brodie & Biley, (1999) An exploration of the potential benefits of pet facilitated therapy. Journal of Clinical Nursing 8(4), 329-337). For many, a meaningful relationship can develop which is reciprocal yet often unacknowledged. Studies have shown a link between ownership or interaction with animals and improved health status (Brodie & Biley, (1999) An exploration of the potential benefits of pet facilitated therapy. Journal of Clinical Nursing 8(4), 329-337). Despite this, the use of pet therapy has not been unopposed. The

Service animals are being chosen with increasing frequency to help mitigate the limitations of persons' disabilities because they are portable, multitasking, and cost-effective health care interventions.

Dogs are most often trained for service work. There is no validated evidence that any particular breed is better in the role—service dogs can be any size or any breed. In addition to dogs, other species are sometimes trained as service animals. The ADA definition of service animal does not limit the species of service animals, but, as emphasized by Kauffman,[3] little is known about the effects of the service role on species other than dogs and cats or the effects that other species in the roles of service animals have on public health and safety.

APPLICATIONS OF SERVICE ANIMALS FOR PERSONS WHO HAVE DISABILITIES

Many persons with disabilities can achieve greater functional independence with the help of service animals. Service animals help persons who have a wide variety of limitations caused by disabilities.[3] Reports to the NSDC during the last several years reflect emerging additional roles for service animals. No longer limited to a single role or species, service animals can be trained to:

- Alert persons who are deaf or hard of hearing to the presence of others or to important sounds (eg, sirens and alarms, a person's name being called, traffic, a child crying, etc).
- Provide help with mobility (eg, retrieve objects, help a person to balance while walking, carry items in backpacks, lead persons who have visual impairments around obstacles, etc).
- Alert persons to oncoming seizures, giving those persons time to stop activities and assume safe positions before seizures or alerting caregivers that seizures are imminent. (The mechanism by which an animal perceives an oncoming seizure is unknown; animals that demonstrate this ability are trained to provide a consistent response as an alerting behavior.) Animals that do not alert their handlers to oncoming seizures might help instead by staying with them during seizures and helping them become reoriented and mobile after the seizures. Several animal species, including dogs, cats, and some reptiles, have been reported to alert people to the onset of seizures.
- Provide a consistent, interactive focus to deescalate stress for persons with mental or emotional disabilities.
- Alert their handlers to episodes of hypoglycemia before the people have symptoms, giving those persons time to monitor and correct their glucose level.
- Help persons who have Parkinson's disease by initiating body contact to interrupt episodes of tremor or propulsive walking (the mechanism by which this is effected is not yet empirically substantiated).

The work of a service animal need not be limited to one category. From an occupational therapy perspective, Zapf describes the range of benefits of service animals trained to help people with multiple disabilities.[4] Allen and Blascovich[5] analyzed the significant health care dollar savings that can be realized when service dogs replace paid caregivers for people with disabilities.

In addition to the tasks that service animals perform, persons with disabilities can benefit from their relationships with their animals. The majority of published studies about the effects of service and companion animals deal not with task-oriented benefits, such as how consistently a guide dog helps its handler avoid obstacles, but rather with how the presence of, and interaction with, the animal can improve the handler's overall quality of life.[6-8] These studies measure how animals mitigate the effects of bereavement,[9,10] moderate stress and promote response to treatments,[11-15] normalize physiologic responses,[16-18] enhance childhood development,[19] improve socialization,[20,21] and provide older adults with social support and motivation.[23-28]

HOW SERVICE ANIMALS DIFFER FROM THERAPY ANIMALS

Service animals and therapy animals serve two separate and distinct health-related roles for persons and differ in the way they provide health benefits to people. As defined in the *Standards of Practice for Animal Assisted Activities and Animal Assisted Therapy*,[29] therapy animals are usually personal pets that, with their owners, provide supervised, goal-directed intervention to clients in hospitals, nursing homes, special-population schools, and other treatment sites. Therapy animals usually are not service animals. The ADA and other federal nondiscrimination laws have no provisions for therapy animals; however, some states have laws that define therapy animals and provide for their access to public areas, such as health care facilities. Information about state and local laws can be obtained from the state Attorney General's office.

SERVICE ANIMAL TERMINOLOGY AND SUPPLY

The formal training of service animals began at the end of World War I, with dogs trained to lead persons who were blind. However, the terminology used to describe these animals was not standardized until 1990, when the ADA coined the term "service animal." Many terms are still used to describe service animals; they are often referred to by the type of work that they do (eg,

guide dog, hearing cat, emotional support dog). A trend toward use of the term "service animal" or "service [species name]" is developing; many persons prefer this because it is consistent with the law and describes the role of the animal without disclosing the nature of the person's disability. It is also useful when an animal cannot be readily categorized because it is cross-trained to help a person who has multiple disabilities.

There have never been recognized standards that are applied uniformly to all service animal trainers, handlers, or service animals. Duncan[30] summarizes the field of service animal training and supply: In most states only a business license is necessary to train a service animal for someone else. Training can be provided by career service animal trainers, independent trainers, or by persons with disabilities. Many persons with disabilities choose to hire an independent trainer or train a service animal themselves to avoid nonreimbursable costs, extensive travel, arbitrary qualification criteria, or long waits (reported to the NSDC by consumers and trainers to range from several months to as long as 9 years). There is no readily recoverable data that indicate any differences in the quality of training, or reliability, of service animals trained by these different sources.

HOW HEALTH CARE FACILITIES ARE AFFECTED BY LAWS THAT APPLY TO SERVICE ANIMALS

Health care facilities—hospitals, clinics, doctors' and dentists' offices, laboratories, imaging services, and others—are covered under the ADA (see Technical Assistance Letter from the US Department of Justice, 1993, Appendix I) and considered places of public accommodation. Title III of the ADA requires that places of public accommodation, including health care facilities, modify their policies and practices to permit the use of a service animal by a person with a disability, unless doing so would create a fundamental alteration or a direct threat to the safety of others or to the facility. For example: a service animal may howl through the night and prevent people from sleeping, or it may, in a nonthreatening manner, block a health care provider from administering care to a client. In contrast, a direct threat would occur were a service animal to growl at or bite someone or "get underfoot" and impede a person's safe travel.

State or local government-owned or funded facilities and service providers have similar responsibilities under Title II of the ADA, which has provisions similar to Title III. Facilities and service providers that are owned or funded by the federal government (such as Veteran's Administration facilities and programs) have responsibilities under Section 504 of the Rehabilitation Act, which are also similar to ADA Title III provisions. Health care programs and facilities owned by religious organizations may be exempt from federal law. For information about the status of any facility, contact the US Department of Justice ADA Information Line at 800-514-0301.

Since service animals meet disability-related needs, they might be found in various areas of the health care system, accompanying persons with disabilities who are employees, patients, visitors, instructors, volunteers, students, or others. Health care facilities may receive conflicting directives about having animals on the premises. States and localities might have laws that also affect service animals. When these laws conflict with federal laws, the law that provides greater protection *to the person with the disability* is the law that prevails; that is, the law that is less restrictive for the person with the disability takes precedence. When conflicting federal laws affect health care facilities, contact the US Department of Justice as above for clarification about the facility's responsibilities.

IDENTIFICATION OF PERSONS WITH DISABILITIES AND SERVICE ANIMALS: CERTIFICATION AND OTHER MYTHS

Public accommodations often have concerns about how to ensure that an animal is really a service animal, fearing that persons will try to present their pets as service animals. The intent of the ADA is not to put a public accommodation into the role of policing the legitimacy of a person's claim of disability or of an animal's function. Rather, its aim is to ensure that the goods and services of a public accommodation are readily accessible to persons with disabilities, regardless of their types of disabilities or the assistive equipment they might use.

A popular belief is that "legitimate" service animals must be "certified." Some trainers offer certification, but without uniform standards for this process, it merely represents the opinion of an evaluator that the animal is capable of doing the work for which it was trained. Certification is not a guarantee of quality or predictability of behavior. The ADA prohibits public accommodations from requiring "certification" or proof of an animal's training, or proof of a person's disability, for the purposes of access.

There is no legal requirement that a service animal wear special equipment or tags. Service animals usually wear the equipment necessary for the work they do; this might be simply a collar and leash.[31] Some localities offer licensing tags for pets and for service animals, but these cannot be required for the purposes of access under the provisions of the ADA.

Health care facilities, like other places of public accommodation, are advised by the US Department of Justice Civil Rights Division to accept the verbal reassurance of the person that he or she has a disability

(and is protected by the ADA), and that the animal is a service animal.[33] Unnecessary inquiry into the nature of the disability, or requiring "proof" or identification of the person's disability or the animal's training, is prohibited by the ADA and other federal nondiscrimination laws. Minimal inquiry is best; this acknowledges the privacy needs of the person with a disability.

Subsequent observation of the behavior of the animal should help in assessing whether the animal constitutes a direct threat to health or safety or a fundamental alteration to the nature of the business. If the animal's presence or behavior creates such a direct threat or fundamental alteration, it does not have to be tolerated by the health care facility. Although "misbehavior" does not necessarily indicate that an animal does not meet the definition of service animal, the health care facility has recourse to protect itself by requiring the removal of the animal from the premises if its presence or behavior creates a direct threat to safety or a fundamental alteration.

IMPLICATIONS OF SERVICE ANIMALS FOR INFECTION CONTROL AND RISK MANAGEMENT

Effective policy development will consider all the facility areas open to persons and the effects a service animal would have on those areas and on the persons within them. Risk assessment will be based on demonstrable factors, not on speculation about what an animal "might" do or whether an area "might" be unsafe for an animal.

It is important for health care providers to differentiate between actual risks posed by a service animal and mere inconvenience or displeasure with the presence of a service animal. Health care providers must make their goods and services available to persons accompanied by service animals without isolating, segregating, or otherwise discriminating against those persons. Published studies about risks posed by animals include zoonotic disease transmission,[35-39] trauma,[40-42] the triggering of allergic reactions,[43] and disruptive or destructive behaviors. The actual risk that a service animal presents will be affected by many factors including its health and hygiene, its behavior, its contact with others, the frequency of that contact, the environment, the ability of its handler to manage its behavior, and the effects of simple preventative measures (eg, handwashing) to reduce the risk of disease transmission.[44]

HANDWASHING FOR EMPLOYEES, CLIENTS, HANDLERS, AND VISITORS

Handwashing is an essential activity in the health care setting. Persons should wash their hands with soap and water after direct contact with the service animal, its equipment, or other items with which it has been in contact. Antimicrobial soap is not required. If there is no running water available, a waterless agent approved for use in the facility may be used.

HANDLER AND CLIENT EDUCATION

Handlers, whether employee, visitor, or patient, must understand that the animal is not allowed to come in contact with any patient's nonintact skin (surgical sites, drainage tubes, wounds, etc). Handlers should be informed of any facility areas that are usually open to them, but which are off-limits to service animals. Facilities should not permit handlers with service animals to act as self-appointed animal-assisted therapy ("pet therapy") providers. Education may also be required for roommates and visitors regarding their interactions with the service animal.

STAFF EDUCATION

Staff may not be well-informed about the roles of service animals and their benefits to the persons who have them. Comprehensive staff education must be provided that includes:

- How service animals are defined
- Ownership and identification criteria
- Laws and policies that apply to service animals and their handlers.
- How to interact appropriately with persons and their service animals.

Such education is vital to prepare staff to competently and confidently address service animal issues (see Resources). Staff education should also include risk-reduction activities, such as handwashing, appropriate use of personal protective equipment (PPE), responsibilities of staff and owner for handling and cleaning issues, and amount and type of client education.

SERVICE ANIMALS IN SPECIFIC CLINICAL AREAS

A service animal may be restricted or denied access to areas where its handler would generally be allowed only when it can be demonstrated that the presence or behavior of that particular animal would create a fundamental alteration or a direct threat to other persons or to the nature of the goods and services provided. Although it may be possible to identify certain areas where a service animal could not reasonably be permitted (eg, an operating room where gowns and masks are required to reduce contamination), other areas may be subject to a case-by-case determination, based on the circumstances and the individual service animal. A birthing room is one example. If persons are allowed to be present without being required to observe special precautions (gowning, scrubbing, etc), it would be difficult to argue that a clean, healthy, well-behaved service animal should be denied entrance. However, if the

service animal causes a fundamental alteration or direct threat, the health care facility may require that the risk be controlled. If it cannot be controlled, then the service animal may be removed from the premises. Similarly, the emergency department, intensive care unit, recovery room, and other areas may require a case-by-case determination to assess actual risk. Some facilities have a crate on site in which a service animal can be temporarily contained while the handler is in a restricted area or if the handler is unable to provide for the stewardship of the service animal.

HIGH-RISK CLIENT POPULATIONS

The basis for determining the risk to clients of contact with a service animal will be the effects of that contact on the client. While health care providers should be aware of potential zoonotic and trauma risks, each case should be evaluated in terms of the condition of the client and the actual risk associated with the individual animal. For example, persons who are immunosuppressed or otherwise debilitated are not necessarily preempted from being in the presence of a service animal. Likewise, an immunocompromised client who is permitted to have contact with visitors without requiring them to wear masks or gowns may not be at any greater risk if a visitor is accompanied by a service dog. Angulo et al[33] and the Centers for Disease Control and Prevention (CDC)[45] describe how immunocompromised persons may have some immunities that protect them from substantial risks through contact with their own animals. Another example is when a person with visual impairments who depends on a guide dog to help him or her forward has spinal surgery; it might be necessary to modify the way in which the dog leads the person, to avoid trauma to the surgical site or to more therapeutically accommodate the person's gait. A third example is when a client who is recovering from severe burns has a visitor who is accompanied by a service dog; if the client avoids direct contact with the service dog, there might be no reason to deny access to the service animal.

ZOONOTIC RISKS

Animals, like persons, can host a wide variety of organisms that are potential pathogens for persons and other animals. There are no substantiated, published studies that have determined the statistical risks associated with healthy, vaccinated, well-cared-for, and well-trained service animals. Nor is there substantial case-reporting data to indicate that service animals pose any greater threat than the average person.[46] Threats of infectious diseases have been well-documented in wild populations of dogs, cats, rodents, turtles, birds[47]; nonhuman primates[48-50]; laboratory animals; and in some domesticated companion animals.[51-53] However, these findings do not necessarily apply to healthy, vaccinated, well-maintained service animals. Avoiding contact with animal urine and feces and good handwashing after contact with the animal can effectively reduce the risks of zoonotic disease transmission.

There are many biosafety and bioethical concerns about exotic (wild) species, such as reptiles, birds, and nonhuman primates (NHPs) in the roles of service animals.[2,54] Whether these animals can be trained to reliably perform tasks is questionable. Their impact on public health and safety is controversial, as are the effects on the animals of the role and lifestyle of service animal. Some species have no available vaccinations to prevent them from contracting and transmitting similar zoonoses that are preventable in dogs and cats. Many exotic species require specific handler permits and are affected by federal, state, and local laws that define where and how the animal may be kept and exhibited. For example, Federal Quarantine Regulations[55] restrict the importation, and sale or distribution, of nonhuman primates because the communicable disease risk from these animals is so great. Importers must register with the CDC, they must implement disease control measures, and they may distribute nonhuman primates only for bonafide scientific, educational, or exhibition purposes. These restrictions also apply to the reimportation of nonhuman primates that originate in the United States.[55,56]

In 1996, the CDC issued a memo to registered importers of nonhuman primates reiterating the public health necessity to limit the distribution of imported nonhuman primates to prevent the introduction and spread of communicable diseases.[56] The use of imported NHPs, including capuchin monkeys, as service animals does not comply with these quarantine regulations. The high rate of injuries caused by their biting, and the zoonotic diseases they transmit, also make these species generally unsuitable as service animals. As described by Johnson-Delaney[57] and Shoemaker,[58] nonhuman primates born in captivity are not considered "domesticated" and still retain wild animal characteristics, including health and behavior risks. Further, all NHP zoonotic disease risks cannot be effectively eliminated through captive breeding. Although training monkeys as service animals may seem appealing because of their high level of dexterity, agility, and problem-solving capabilities, little has been published about the effects on the person who has a monkey as a service animal. However, persons who have monkeys as pets report incidents of bites and the need to remove many of the monkeys' teeth to reduce damage from these bites; increasingly aggressive and difficult-to-control behaviors as a monkey

Table 1. Possible zoonotic risks among dogs, cats, and nonhuman primates (NHPs)

Animal	Disease	Organism	Source	Prevention
All	Rash; infection in, or allergic reaction to, bites	Variety	Fleas, mites	Eradication of fleas and mites
Dog	Bacterial diarrhea	Variety of organisms: *campylobacter*, etc	Feces	Handwashing
	Dermatophytosis (ringworm)	Tinea (Microsporum spp, Trichophyton spp, others)	Contact	Handwashing
	Giardia	Giardia protozoan	Feces	Handwashing
	Leptospirosis	*Leptospira interrogans*	Urine	Handwashing
	Lyme disease	*Borellia burgdorferi*	*Vector*: tick Tick bite	Eradication of ticks
	Rabies	*Lyssavirus rhabdovirus*	Saliva	Vaccination of animal
	Rocky Mt Spotted Fever	*Rickettsia rickettsii*	*Vector*: tick Tick bite	Eradication of ticks
	Scabies	*Sarcoptes, cheyletiella*	Mites	Eradication of mites
	Toxocariasis (Larval migrans)	Toxocara canis and *T cati*	Feces	Handwashing
Cat	Bacterial diarrhea	Variety of organisms: *campylobacter*, etc	Feces	Handwashing
	Cat scratch disease	*Bacillus*	Cat scratch, bite, lick, or other exposure (usually to kitten)	Handwashing
	Cryptosporidiosis	Cryptosporidium protozoan	Feces	Handwashing
	Dermatophytosis (Ringworm)	Tinea (Microsporum spp, Trichophyton spp, others)	Contact	Handwashing
	Rabies	Lyssavirus rhabdovirus	Saliva	Vaccination of animal
	Rash; infection in, or allergic reaction to, bites		Fleas, mites	Eradication of fleas and mites
	Toxocariasis (Larval migrans)	*Toxocara canis* and *T cati*	Feces	Handwashing
	Toxoplasmosis	*Toxoplasma gondii*	Feces	Handwashing
Nonhuman primates (NHPs)	Bacterial diarrhea	Variety of organisms: shigellosis, (59), etc	Feces	Handwashing
	Pneumonia	Bacteria, viruses, etc	Undefined—may include direct and indirect contact with secretions; airborne	Prevent exposure to host
	Rabies	Lyssavirus rhabdovirus	Saliva	Vaccination of animal*
	Tuberculosis	Mycobacterium tuberculosis	Airborne droplet nuclei	Prevent exposure to host
	Viral, including rhinovirus, influenzas, diphtheria, pertussis, herpesvirus, and	Variety of viruses	Direct or indirect contact; airborne	Prevent exposure to host
	Hepatitis A	Hepatitis A virus (HAV)	Feces	Vaccination of animal*
	Hepatitis B	Hepatitis B virus (HBV)	Body fluids	Vaccination of animal*
	Mumps	Paramyxovirus	Droplet and direct contact with saliva	Prevent exposure to host
	Measles	*Paramyxoviridae morbillivirus*	As above, and with freshly contaminated articles	Vaccination of animal*
	Polio	Poliovirus	Fecal, pharyngeal secretions	Vaccination of animal*

*Indicates few challenge studies available to definitively assess efficacy of vaccine.[47]

matures; the difficulty to achieve durable training; and other wild traits.[58]

Without studies specific to service animals, it is difficult to note which infectious diseases might reasonably be expected in service animals. Risk assessment should include all factors of disease transmission and susceptibility. The likelihood that circumstances will occur in which the animal may become infected, and

transmit the disease, as well as the possibility that a person could transfer a disease or infestation to the animal, should be considered. For example, when a person has no direct contact with feces from a dog that harbors intestinal giardia, there may be little risk to human health. A monkey that harbors giardia may present a much greater risk because monkeys generally cannot be reliably housetrained or prevented from touching their anal areas then touching persons or items that persons handle. Table 1 lists some zoonotic diseases that can occur among domesticated dogs and cats[44] and among monkeys.[57] For more information about transmission, effects, treatments, and preventions, consult a reference such as *Control of Communicable Diseases in Man*.[59] For information about local, animalborne disease concerns, consult the local Department of Public Health.

SERVICE ANIMAL HEALTH

If a service animal is epidemiologically linked to an infection or outbreak, the animal should be examined by a veterinarian. Assumptions about the service animal's health should not be made by nonveterinary health care providers. If disease transmission occurs because of inadequate use of prudent prevention techniques (such as handwashing), then appropriate interventions should be developed on the basis of the findings. If a service animal does exhibit a condition that presents a direct threat to the health or safety of others, then the animal may be removed, restricted, or denied access to the area, or additional information may be required about the animal if it is necessary to protect public health and safety. For example, it may be possible that proof of rabies vaccination in service dogs for the purpose of access would be allowable in an area with a high prevalence of dog rabies, if it could be demonstrated that requiring such documentation was necessary to protect public health and safety. Consult the US Department of Justice ADA Information Line, (800) 514-0301, for guidance about initiating restrictive policies.

AREA CLEANUP

No special housekeeping methods are needed, provided there is no contamination with animal urine, feces, vomit, or blood (organic debris). If the animal contaminated the area, the cleanup procedures should be performed by using appropriate personal protective equipment (PPE). Gloves are the minimum protection that should be used. The spill should be removed with paper towels, which should be placed in a plastic bag in the trash container, similar to the disposal of diapers. After removal of the organic debris, the area of the spill should be cleaned with a facility-approved disinfectant, following label instructions for adequate contact time to ensure disinfection.

ALLERGIES

Allergic reactions to the animal can occur among staff or other clients.[60,61] Avoiding or limiting contact with the service animal's saliva, dander, and urine will help mitigate allergic reactions.[62] According to the American Academy of Allergy, Asthma & Immunology, dog or cat allergies occur in approximately 15% of the population.[62] If the allergy is severe enough to cause impairments that substantially limit one or more major life activities (ie, causes a disability as defined in the ADA), both the person with the allergy and the person with the service animal are protected by the ADA, and the facility is obligated to ensure their access to its goods and services. If the effects of the allergy[63] do not meet the definition of disability, the ADA does not protect the person with the allergy and the facility does not have an ADA obligation toward the person who has the allergy.

ROOMMATE ISSUES

Health care facilities should establish policies for accommodating service animals when private rooms are not available. These policies should include guidance about nondiscriminatory actions to take when roommates have conditions or preferences precluding them from being in the presence of a service animal.

The ADA provides the minimum parameters required for access by persons with disabilities who are accompanied by service animals. Policy development should differentiate between modifications of policies and practices made to comply with legal requirements and those made as elective customer service interventions. This will provide rationale if a facility initiates policies that provide fewer access restrictions than those mandated by the laws.

STEWARDSHIP OF THE SERVICE ANIMAL: ITS CARE AND BEHAVIOR MANAGEMENT IN THE HEALTH CARE FACILITY

The ADA specifies that the care and behavior management (stewardship) of the service animal is the responsibility of the handler. Because of the many health benefits a service animal can provide, facilities may elect to support the presence of the animal by providing a system to obtain emergency stewardship when the patient needs help but has no one to assist with the animal's care. In-house or community volunteer services, animal welfare organizations, community service organizations, animal caregivers (eg, veterinary, boarding, grooming, or walking/sitting services), and dog training and breed fancy clubs may be among the

resources available to help provide stewardship for a client's service animal. Legal services should be consulted regarding any formal consent needed when the handler transfers responsibility for service animal stewardship to a facility representative. Other issues that must be addressed on a case-by-case basis include, but are not limited to, exercise of the animal, cleanup of excrement in the toileting area, and storage of the animal's food and water.

It would be a reasonable modification of policies and practices to identify an area accessible to the handler where the service animal could toilet and to permit the service animal to be exercised by another person, if the handler was unable.

Temporary confinement of the service animal provided by the health care facility

If the handler is unable to care for his or her service animal while receiving treatment or services from a facility, the facility may elect to provide a crate or other containment for the animal for a short term (24 hours or less). This situation brings up many issues that must be addressed, such as cleaning and disinfection of the crate during and after use, as well as feeding, watering, and exercising the animal during its confinement. These issues should be discussed with the facility's risk management or legal department for guidance about facility and personal liability, insurance considerations, necessary handler consent, and other related factors.

Facility-provided housing

When facilities provide or contract to provide housing, such as that provided for significant others or for clients undergoing outpatient treatment, the facility is obligated to permit the use of service animals by persons with disabilities, unless the service animals create fundamental alterations or safety hazards. This is covered by provisions of the ADA or of the Fair Housing Amendments Act.

"No pets" policies

"No pets" policies may not be applied automatically to service animals. Legally, service animals are not considered "pets." Facilities must be able to demonstrate that the presence or behavior of an animal would create a fundamental alteration or direct threat in the area in question.

Persons accompanied by service animals may be informed of any areas that are off-limits to service animals. This may occur when the person enters the facility and should be done in a polite and respectful manner. Policies must be communicated to the person in a way that is accessible and understandable for that person (eg, verbal, print, sign language interpreted, or lipread). If a person with a service animal must have access to an area that is off-limits to service animals, it is the responsibility of the person to provide alternate stewardship for the animal during the time he or she is in the area. See also *Stewardship of the Service Animal: Its Care and Behavior Management in the Health Care Facility and Temporary Confinement of the Service Animal Provided by the Health Care Facility.*

INCIDENTS INVOLVING SERVICE ANIMALS AND FIRST AID

Any injuries caused by a service animal must be evaluated and treated promptly by medical personnel following protocols for the type of injury, in an emergency department or urgent care facility, if necessary. Report the injury to the owner of the animal and to the local enforcement agency (often this is Animal Control), which can obtain vaccination verification and enforce animal control regulations. Any incident involving a service animal, whether the service animal caused the incident or was affected by the incident, must be comprehensively documented. If a service animal damages property, the handler may be held responsible for those damages, provided a policy already exists—and is enforced—that would require payment if a person caused similar damages. If a service animal is injured, prompt evaluation and treatment of injuries should be provided by a veterinarian.

CONCLUSION

Service animals provide persons with disabilities a dignified way to remain integrated in their communities. In the 80 years that service animals have been trained and used in the United States, there is no appreciable body of evidence to suggest that healthy, vaccinated, well-trained service dogs pose any threat to public health and safety that is significantly greater than the risks posed by the general public. Through a literature review and queries to the CDC, the US Department of Justice Civil Rights Division, APIC, and Delta Society (NSDC), no reported clusters or epidemics of incidents have been attributed to service animals. This absence of data implies that the health and behavior management of service dogs has generally been adequate to control their risks as sources of zoonoses. Additional research about the specific effects of service animals on public health and safety, including species related information, is necessary to develop more sophisticated risk-management guidelines and recommendations for health care practices.

Service animals meet their handler's disability-related needs, often more efficiently than other persons or equipment. They provide their handlers with enhanced

functional ability and quality of life. All health care workers and ancillary staff that have contact with patients or the public must understand their rights and their obligations to persons with disabilities who are accompanied by service animals. Welcoming persons with service animals into health care facilities is not just the law—it is good community support.

Any information provided in this SOAR about the laws that apply to service animals is intended only as technical assistance. It is not legal advice, and is not binding on APIC or Delta Society.

RESOURCES

Additional information about service and therapy animals is available from Delta Society. Health care facilities will be particularly interested in *Service Dogs Welcome!*, an education system that prepares health care employees to respond competently to service animal issues; the *Standards of Practice for Animal Assisted Activities and Therapy* for practitioners and facilities; and the standards-based Pet Partners system for animal-assisted activities and therapy. For a free catalog of courses, products, and services, contact: Delta Society, 289 Perimeter Rd E, Renton, WA 98055; Web site: *www.deltasociety.org;* fax: (425) 235-1076; e-mail: *NSDC@deltasociety.org;* telephone: (800) 869-6898 (206-226-7357 outside of the United States).

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APPENDIX I.

TECHNICAL ASSISTANCE LETTER FROM THE US DEPARTMENT OF JUSTICE

Reprinted 5/28/98 from the Department of Justice's Web site under the Freedom of Information Act.

Cltr066.txt @ www.usdoj.gov
#66
III-4.2300 May 10, 1993
The Honorable John C. Danforth
United States Senator
8000 Maryland Avenue
Suite 440
Clayton, Missouri 63105
Dear Senator Danforth:

This letter is in response to your inquiry on behalf of your constituent, _____, and her concern about the Americans with Disabilities Act (ADA) and service animals in hospitals.

The ADA authorizes the Department of Justice to provide technical assistance to individuals and entities having rights or obligations under the Act. This letter provides informal guidance to assist _____ in understanding the ADA's requirements. This technical assistance, however, does not constitute a determination by the Department of Justice of rights or responsibilities under the ADA, and does not constitute a binding agreement by the Department of Justice.

Unless it is a religious entity or under the control of a religious organization, a health care facility, such as a hospital, is covered by the provisions of title III of the ADA and the Department's title III regulation as a place of public accommodation (see section 36.104 of the enclosed regulation). According to section 36.302 (C), a public accommodation is required to modify policies, practices, or procedures to permit the use of a service

animal by an individual with a disability. The intent of this regulation is to ensure that the broadest feasible access be provided to service animals in all public accommodations, including hospitals and nursing homes. This regulation also acknowledges that in rare circumstances, if the nature of the goods and services provided or accommodations offered would be fundamentally altered, or if the safe operation of a public accommodation would be jeopardized, a service animal need not be allowed to enter.

A showing by appropriate medical personnel that the presence or use of a service animal would pose a significant health risk in certain areas of a hospital may service as a basis for excluding service animals in those areas. In developing a list of areas from which service animals may be excluded, a hospital facility must designate only the exact areas where exclusion is appropriate. For example, if a hospital facility does not allow the presence of a service animal used by an individual receiving out-patient care, this decision must be based on a medical determination that the presence of the service animal would pose a significant health risk, or that the services provided by the hospital would be fundamentally altered. If a service animal must be separated from an individual with a disability, in order to avoid a fundamental alteration or a threat to safety, it is the responsibility of the individual with a disability to arrange for the care and supervision of the animal during the period of separation. See section 36.302 © (2).

For your information, we have also enclosed a copy of a 1988 memorandum interpreting the application of section 504 of the Rehabilitation Act of 1973, as amended, to the presence of service animals in health care facilities. As you can see, the Federal government's policy on this issue has been consistently applied for a lengthy time period.

I hope this information is helpful in responding to _____'s concerns.

Sincerely,
James P. Turner
Acting Assistant Attorney General
Civil Rights Division

The following article is an AJIC Online Exclusive.
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www.mosby.com/ajic.

APIC Commentary on "Healthcare Waste Management: A Template for Action"

Susan Blumstein MT, CIC, Jolynn Zeller RN, BS, CIC, and Bob Sharbaugh PhD, CIC