



COMPANION ANIMALS, IMMUNOCOMPROMISED INDIVIDUALS AND MENTAL HEALTH

A One Health Case Study

Prepared for the AAVMC

Authors: Stephen Cole, VMD, MS and Shelley Rankin, PhD

October 2015

COMPANION ANIMALS, IMMUNOCOMPROMISED INDIVIDUALS AND MENTAL HEALTH

**Women's Health Issues**

Volume 22, Issue 1, January–February 2012, Pages e27–e33



Original article

The Relationship Between Social Roles and Self-Management Behavior in Women Living with HIV/AIDSAllison R. Webel, PhD, RN  , Patricia A. Higgins, PhD, RN[+ Show more](#)

Ten percent ($n = 5$) of the sample identified their role as a pet owner as being helpful in managing their HIV disease. Pets were a primary source of support and pleasure.

I got my cat, Sunshine, and that's my baby. She's going to be right there when I'm hurting, and that's unconditional love. She asks for nothing. She's right there for me, and I feed her and she'll get up on the couch with me, and she knows when I'm feeling bad, because . . . she'll rub up all against me and she'll look at me and she'll touch her nose to my nose and I know she knows that I'm feeling bad on the inside, and then I'll sing this little song that I sing "You Are My Sunshine" and . . . that tail just gets to going, and that makes me feel good. That makes me feel at peace, and then I'm satisfied. *47 years old, Caucasian, diagnosed in 2009*

She's a German Shepherd mixed with Lab . . . and dogs know when you're in a bad mood . . . she just lays up under me. She knows that I'm sick and everywhere I go, she goes. She wants to protect me. *45 years old, African American, diagnosed in 2001*

In this social role, our participants reported social interactions with their pets, not other human beings. But the impact of fulfilling this social role, caring for the daily needs of the pet, providing love and support to them, and the perceived reciprocation by the pet, led women to report increased stress reduction related to their HIV disease—an important self-management outcome.

COMPANION ANIMALS, IMMUNOCOMPROMISED INDIVIDUALS AND MENTAL HEALTH

AIDS Care: Psychological and Socio-medical Aspects of AIDS/HIV

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/caic20>

AIDS diagnosis and depression in the Multicenter AIDS Cohort Study: The ameliorating impact of pet ownership

J. M. Siegel , F. J. Angulo , R. Detels , J. Wesch &
A. Mullen

Pet ownership was common among MACS participants—48% for the total sample and 51% among HIV-infected participants. These levels of ownership were slightly lower than the estimated 60% of all US households, and somewhat higher than both a national estimate for middle-aged single persons (American Veterinary Medical Association, 1992) and the proportion in another study of an AIDS population (Conti *et al.*, 1995). The benefit of pet ownership is most likely achieved through the companionship pets offer. In research with elderly persons (Siegel, 1990), companionship or company (cited by 75%), feelings of security (25%) and feeling loved (21%) were mentioned most frequently in response to an open-ended question on the benefits of pet ownership. Both older persons and HIV-infected persons may have particularly pronounced companionship needs because loss of a loved one, a potent precursor to depression, is common in these cohorts. In our sample, social isolation or stigmatization may be present as well, either on the basis of sexual orientation or illness, and these experiences, in turn, can exacerbate depressed affect. Our data on confidant support are consistent with this line of reasoning, in that pet ownership was most influential in reducing AIDS-associated depression among persons with low levels of confidant support. Moreover, the most significant impact of pet ownership was among men with high levels of

AIDS DEPRESSION AND PET OWNERSHIP 167

attachment to their pets and low levels of confidant support. Other research converges in demonstrating an association between pet attachment and health among respondents with low levels of human support, but not among those with adequate human support (Garrity *et al.*, 1989). Thus, pets may fulfil important companionship needs for men with AIDS and also promote psychological wellbeing.

COMPANION ANIMALS, IMMUNOCOMPROMISED INDIVIDUALS AND MENTAL HEALTH

Preventing Zoonotic Diseases in Immunocompromised Persons: The Role of Physicians and Veterinarians

Sara Grant and Christopher W. Olsen
University of Wisconsin, Madison, Wisconsin, USA

We surveyed physicians and veterinarians in Wisconsin about the risk for and prevention of zoonotic diseases in immunocompromised persons. We found that physicians and veterinarians hold significantly different views about the risks posed by certain infectious agents and species of animals and communicate very little about zoonotic issues; moreover, physicians believe that veterinarians should be involved in many aspects of zoonotic disease prevention, including patient education.

Table 1. Survey of veterinarians

Questions	Responses
How often do you encounter or discuss zoonotic diseases in your patient population? 1=Several times/day; 2=Daily; 3=Weekly; 4=Occasionally; 5=Never	$\bar{X} = 3.02^a (\pm 0.05)^b$
How often do physicians contact you for advice on the animal aspects of transmission and risks of zoonotic diseases? 1=Several times/week; 2=Several times/month; 3=Several times/year; 4=Rarely; 5=Never	$\bar{X} = 4.30 (\pm 0.04)$
How often do you contact physicians regarding a zoonotic disease? 1=Several times/week; 2=Several times/month; 3=Several times/year; 4=Rarely; 5=Never	$\bar{X} = 4.21 (\pm 0.04)$
If you know that a client is immunocompromised, do you offer consultation on zoonotic disease prevention?	
- Yes	n=96 ^c
- No	n=9
- The situation has never arisen	n=205
How much risk to immunocompromised patients is associated with owning or having contact with the following animals? 1=Highest risk to 5=Lowest risk	
- Reptile	$\bar{X} = 2.28 (\pm 0.09)$
- Bird	$\bar{X} = 2.49 (\pm 0.07)$
- Kitten (<6 months of age)	$\bar{X} = 2.81 (\pm 0.07)$
- Puppy (<6 months of age)	$\bar{X} = 3.02 (\pm 0.07)$
- Farm animals	$\bar{X} = 3.05 (\pm 0.07)$
- Cat	$\bar{X} = 3.28 (\pm 0.06)$
- Dog	$\bar{X} = 3.86 (\pm 0.06)$

^aMean of all respondents.

^bStandard error of the mean.

^cAbsolute number of veterinarians answering "yes", "no" or "the situation has never arisen".

COMPANION ANIMALS, IMMUNOCOMPROMISED INDIVIDUALS AND MENTAL HEALTH

Table 2. Survey of physicians

Questions	Responses
How often do you encounter or discuss zoonotic diseases in your patient population? 1=Several times/day; 2=Daily; 3=Weekly; 4=Occasionally; 5=Never	$\bar{X} = 4.16^a (\pm 0.03)^b$
How comfortable do you feel in advising patients specifically on the animal aspects of transmission and the risks for zoonotic diseases? 1=Very comfortable to 5=Not comfortable	$\bar{X} = 3.69 (\pm 0.05)$
Should veterinarians be involved in advising clients about the potential for zoonotic disease? 1=Veterinarian should have primary responsibility; 3=Responsibility should be equal; 5= Physician should have primary responsibility	$\bar{X} = 2.77 (\pm 0.05)$
How involved should veterinarians be in the following areas in reducing transmission of zoonotic disease agents to immunocompromised patients, providing that client confidentiality is maintained? 1=Very involved to 5=Not involved	
- General maintenance of animal health	$\bar{X} = 1.62 (\pm 0.06)$
- Additional zoonotic disease screening of animals	$\bar{X} = 1.78 (\pm 0.06)$
- Zoonoses education for patients	$\bar{X} = 2.08 (\pm 0.06)$
- Consultation for physicians	$\bar{X} = 2.12 (\pm 0.06)$
How often do veterinarians contact you regarding zoonotic diseases? 1=Several times/week; 2=Several times/month; 3=Several times/year; 4=Rarely; 5=Never	$\bar{X} = 4.74 (\pm 0.03)$
How often do you contact veterinarians for advice on the animal aspects of transmission and risks of zoonotic diseases? 1=Several times/week; 2=Several times/month; 3=Several times/year; 4=Rarely; 5=Never	$\bar{X} = 4.55 (\pm 0.03)$
How much risk to immunocompromised patients is associated with owning or having contact with the following animals? 1=Highest risk to 5=Lowest risk	
- Bird	$\bar{X} = 2.37 (\pm 0.07)$
- Kitten (<6 months of age)	$\bar{X} = 2.47 (\pm 0.08)$
- Cat	$\bar{X} = 2.58 (\pm 0.07)$
- Reptile	$\bar{X} = 2.64 (\pm 0.09)$
- Farm animals	$\bar{X} = 2.94 (\pm 0.08)$
- Puppy (<6 months of age)	$\bar{X} = 3.28 (\pm 0.08)$
- Dog	$\bar{X} = 3.69 (\pm 0.06)$

^aMean of all respondents.^b± Standard error of the mean.

Guidelines for the Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents

Pet-Related Exposures

Health-care providers should advise HIV-infected persons of the potential risk posed by pet ownership. However, they should be sensitive to the psychological benefits of pet ownership and should **not** routinely advise HIV-infected persons to part with their pets. Specifically, providers should advise HIV-infected patients of the following precautions.

General

HIV-infected persons should avoid direct contact with stool from pets or stray animals. Veterinary care should be sought when a pet develops diarrheal illness. If possible, HIV-infected persons should avoid contact with animals that have diarrhea.

When obtaining a new pet, HIV-infected patients should avoid animals aged <6 months (or <1 year for cats) and specifically animals with diarrhea. Because the hygienic and sanitary conditions in pet-breeding facilities, pet stores, and animal shelters vary, patients should be cautious when obtaining pets from these sources. Stray animals should also be avoided, and specifically those with diarrhea.

Gloves should always be worn when handling feces or cleaning areas that might have been contaminated by feces from pets. Patients should wash their hands after handling pets and also before eating. Patients, especially those with CD4 cell counts < 200 cells/ μ L should avoid direct contact with all animal feces to reduce the risk for toxoplasmosis, cryptosporidiosis, salmonellosis, campylobacteriosis, *E. coli* infection, and other infectious illnesses. HIV-infected persons should limit or avoid direct exposure to calves and lambs (e.g., farms, petting zoos). Paying attention to hand hygiene (i.e., washing hands with soap and water, or alcohol-based hand sanitizers if soap and water are unavailable) and avoiding direct contact with stool are important when visiting premises where these animals are housed or exhibited.

Patients should not allow pets, particularly cats, to lick patients' open cuts or wounds and should take care to avoid any animal bites. Patients should wash all animal bites, animal scratches, or wounds licked by animals promptly with soap and water and seek medical attention. A course of antimicrobial therapy might be recommended if the wounds are moderate or severe, demonstrate crush injury and edema, involve the bones of a joint, involve a puncture of the skin near a joint, or involve a puncture of a joint directly.

COMPANION ANIMALS, IMMUNOCOMPROMISED INDIVIDUALS AND MENTAL HEALTH

Cats

Patients should be aware that cat ownership may under some circumstances increase their risk for toxoplasmosis and *Bartonella* infection, and enteric infections. Patients who elect to obtain a cat should adopt or purchase an animal aged >1 year and in good health to reduce the risk for cryptosporidiosis, *Bartonella* infection, salmonellosis, campylobacteriosis, and *E. coli* infection.

Litter boxes should be cleaned daily, preferably by an HIV-negative, non-pregnant person; if HIV-infected patients perform this task, they should wear gloves and wash their hands thoroughly afterward to reduce the risk for toxoplasmosis. To further reduce the risk for toxoplasmosis, HIV-infected patients should keep cats indoors, not allow them to hunt, and not feed them raw or undercooked meat. Although declawing is not usually advised, patients should avoid activities that might result in cat scratches or bites to reduce the risk for *Bartonella* infection. Patients should also wash sites of cat scratches or bites promptly and should not allow cats to lick patients' open cuts or wounds. Care of cats should include flea control to reduce the risk for *Bartonella* infection. Testing cats for toxoplasmosis or *Bartonella* infection **is not recommended**, as such tests cannot accurately identify animals that pose a current risk for human infection.

Birds

Screening healthy birds for *Cryptococcus neoformans*, *Mycobacterium avium*, or *Histoplasma capsulatum* **is not recommended**.

Other

HIV-infected persons should avoid or limit contact with reptiles (e.g., snakes, lizards, iguanas, and turtles) and chicks and ducklings because of the high risk for exposure to *Salmonella spp.* Gloves should be used during aquarium cleaning to reduce the risk for infection with *Mycobacterium marinum*. Contact with exotic pets (e.g., nonhuman primates) should be avoided.

COMPANION ANIMALS, IMMUNOCOMPROMISED INDIVIDUALS AND MENTAL HEALTH
