



# **CARE OF IMMUNOCOMPROMISED INDIVIDUALS: THE ROLE OF COMPANION ANIMALS IN MENTAL HEALTH**

A One Health Case Study

Prepared for the AAVMC

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## SUMMARY

### Synopsis

Unfortunately, the diagnosis of HIV/AIDS often carries social discrimination and misunderstanding. For many HIV/AIDS patients, their relationship with their pets may be one the only relationship that remains unchanged once a diagnosis is made. This case study will focus on the mental health benefits that pets play in the lives of immunocompromised individuals and weigh them with the health risks that they may present. Participants will play the role of both human healthcare provider and veterinarian during this exercise. Through playing both roles, regardless of the participants training, they will be able to see the critical role these professions play in preventing zoonotic disease transmission. Collaborative discussions will pinpoint ways to minimize risk for the patient such as hygiene, behavior and veterinary care of the animal. This will morph into a discussion of mental health being an integral part of human health and, therefore, a critical pillar within One Health.

### Goals

1. Understand the roles that human healthcare providers, veterinarians and mental health professionals play in order to best serve an immunocompromised individual and their pet(s).
2. Discuss zoonotic disease risks for the immunocompromised and ways of prevention.
3. Learn about the mental health benefits of pet ownership for immunocompromised.
4. Develop skills to help individuals weigh the risks and benefits of pet ownership while living with HIV/AIDS and other diseases.

### Activity Outline

Introduction (5 mins)

Part 1 (30 minutes)

The Human Healthcare Provider's Role

Part 2 (30 Minutes)

The Veterinarian's Role (Optional Activity)

Part 3 (30 Minutes)

The Mental Health Professional's Role

Conclusion (20 minutes)

### Case Classification

Analysis Case

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**CARE OF IMMUNOCOMPROMISED INDIVIDUALS: THE ROLE OF COMPANION ANIMALS IN MENTAL HEALTH****About the Authors**

*Stephen Cole, VMD, MS:* Dr. Cole is currently the Clinical and Molecular Microbiology Fellow in the University of Pennsylvania's Small Animal Diagnostic Services (Department of Pathobiology). He graduated from Penn's School of Veterinary Medicine in 2015 with his VMD. He earned both his BS and MS degrees from the College of William and Mary (Williamsburg, VA) in biology with a focus on Microbiology. He is a founding member of the One Health Club at PennVet.

*Shelley Rankin, PhD:* Dr. Rankin is Associate Professor (CE) of Microbiology at the University of Pennsylvania's School of Veterinary Medicine. She currently serves as the Head of Diagnostic Services and Section Chief of Microbiology for the Ryan Small Animal Hospital. She formally served as the Section Chief for Large Animal Microbiology at the Pennsylvania Animal Diagnostic Laboratory Service (PADLS). She received her BSc in Microbiology and PhD in Molecular Epidemiology from the University of Glasgow.

## INTRODUCTION

### Background

It is estimated that about 3.6% of the United States population is immunocompromised (approximately 10 million people). This includes HIV/AIDS patients, cancer patients and organ transplant recipients. However, these figures do not include those treated with immunosuppressive drugs for autoimmune diseases, so this is likely an underestimate. With a growing immunocompromised population increasing, increased discussion and research on how they can best live safe, happy and fulfilled lives is needed.

Diagnosis with HIV is understandably devastating and life-changing. Many changes have to occur including changes in diet, exercise, sexual practices, hygiene and smoking habits. There is debate, often, about whether or not currently owned pets should be given away to protect from potential zoonoses. However, this could cause significant emotional stress and pain during an already terrible time in a person's life.

The following is a case study of an individual diagnosed with HIV. You will play the roles of Human healthcare provider, Veterinarian and Mental Health Professional as this patient makes the decision whether to keep their pet and the associated changes involved with the decision.

### Key Terms

**AIDS-** Acquired Immunodeficiency Syndrome. A clinical condition that results from infection with the human immunodeficiency virus (HIV), which progressively damages the body's ability to protect itself from disease organisms and malignancies. Thus, many AIDS deaths result from pneumonia, tuberculosis or diarrhoea; death is not caused by HIV itself but by one or more of these infections.

**HIV-** Human Immunodeficiency Virus. A retrovirus of the genus Lentivirus that causes AIDS by infecting helper T cells of the immune system. The most common serotype, HIV-1, is distributed worldwide.

**Immunocompromised individual-** A person with an impaired immune system secondary to genetic, infectious or iatrogenic etiologies.

**Zoonotic Disease-** A disease that can be transmitted from animals to people. Immunocompromised individuals are a particularly at risk population for infection.

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## PART 1- THE HUMAN HEALTHCARE PROVIDER'S ROLE

### Scenario

On routine STI (Sexually Transmitted Infection) screening, one of your patients tested positive for the Human Immunodeficiency Virus (HIV). After the confirmatory tests, you meet with the patient to discuss management of the disease. You discuss a variety of suggestions and you ask if they have any questions. Your patient read online that they may need to get rid of their pet and seem visibly distressed by the idea. Below are questions that may be relevant for your discussion.

### Questions for Discussion

- (1) What diseases are cat owners at risk of contracting?
    - What precautions should the patient take to prevent transmission (pet care will be covered later)?
  
    - What symptoms should the patient be on the lookout for?
  
  - (2) What diseases are dog owners at risk of contracting?
    - What precautions should the patient take to prevent transmission (pet care will be covered later)?
  
    - What symptoms should the patient be on the lookout for?
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(3) If a new pet is desired what species should NOT be considered?

(4) Any other recommendations for care of non-feline or canine pets?

(5) You also know that there are some mental health benefits to pet ownership and would like your patient to get further information in order to make a decision. Who do you recommend he/she speaks with?

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## PART 2- THE VETERINARIAN'S ROLE

### Scenario

You have a very busy day scheduled but one of your longterm clients calls the office and asks for an appointment. You squeeze them in during your lunch break, but when you walk into the room, their pet is nowhere to be seen. They seem visibly upset and when you ask if everything is "ok?" The client reveals to you that they were recently diagnosed with HIV and are concerned they may have to give up their pet.

### Questions for Discussion

(1) What can you legally ask about the health status of your client? How can you reassure your client?

(2) What sort of testing should be performed to determine the health status of a dog?

(3) What prophylaxis/routine care should be used for dogs?

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(4) Are there any other "lifestyle" or behavioral changes that should be considered for dogs?

(5) What sort of testing should be performed to determine the health status of a cat?

(6) What prophylaxis/routine care should be used for cats?

(7) Are there any other "lifestyle" or behavioral changes that should be considered for cats?

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## CONCLUSION

### Questions

- 1) Can you extrapolate other scenarios where the concerns and discussion points raised in this scenario could also be applied?
  
  - 2) Summarize the health risks associated pet ownership for immunocompromised individuals.
  
  - 3) Summarize the health benefits.
  
  - 4) Reflect on the roles of the different professionals in this scenario. Do you feel as though one contributed more than another? What information would be missing from the scenario without each of these participants? What did you find interesting from the survey results in the pre-reading selections?
  
  - 5) What changes to our current approach to comprehensive healthcare could ultimately improve the lives of people and animals?
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**Scenario**

Regardless of the recommendations made by the professionals in this scenario, the decision to keep a pet after diagnosis with HIV is an extremely personal one. Please take a moment to reflect on what you may do if presented with this scenario. Regardless of field, compassion and understanding from a place of non-judgment may help an individual through a very difficult time. Mental Health is a very important part of human health, and therefore, One Health.

**NOTES**

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