PREVALENCE AND RISK FACTORS FOR FELV, FIV, AND HEARTWORM INFECTION IN NORTH AMERICAN CATS.

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Reliable tests and preventive vaccines and medications for feline retroviral and heartworm (HW) infections are available, but compliance with protocols to reduce transmission is unknown. No large-scale longitudinal studies evaluating prevalence over time have been reported. The purpose of this study was to determine the prevalence and risk factors for infection compared with a similar study completed for the first time 5 years previously.

Veterinary clinics and animal shelters in the US and Canada submitted results of testing using a point-of-care ELISA for FeLV antigen, FIV antibody, and HW antigen (IDEXX SNAP Triple) and risk factor information for cats tested during March-September 2010. Bivariable and multivariable analyses were used to evaluate risk factors for infections.

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| **Prevalence (%) of infection by risk factor (unadjusted for other covariates or clinic/shelter effects)** | | | | |
| **Risk factor** | **n** | **FeLV** | **FIV** | **HW\*\*** |
| **All cats** | 62,301 | 3.1 | 3.6 | 0.4 |
| **Owned** | 38,741 | 3.1 | 3.4 | 0.4 |
| **Unowned** | 23,560 | 3.2 | 3.9\* | 0.5 |
| **Indoor** | 25,440 | 2.0 | 1.7 | 0.2 |
| **Outdoor** | 36,147 | 3.9\* | 5.0\* | 0.5\* |
| **Female** | 30,741 | 2.8 | 2.0 | 0.4 |
| **Male** | 31,560 | 3.5\* | 5.1\* | 0.4 |
| **Juvenile** | 26,941 | 2.5 | 1.6 | NA |
| **Adult** | 35,360 | 3.6\* | 5.1\* | 0.4 |
| **Healthy** | 45,260 | 1.7 | 2.0 | 0.3 |
| **Unhealthy** | 17,041 | 7.1\* | 7.7\* | 0.6\* |
| **Respiratory disease** | 4,889 | 8.0\* | 6.5\* | 1.0\* |
| **Oral disease** | 1,698 | 5.1\* | 10.1\* | 0.8\* |
| **Abscess** | 2,050 | 5.9\* | 12.8\* | 0.9\* |
| \*P< 0.05 \*\*adult cats only | | | | |

A total of 62,301 cats were tested. Only 16% of owned cats were prescribed HW preventive. Risk of retroviral infections was increased by outdoor access, adulthood, and male gender. The most important risk factor associated with all 3 infections was clinical disease; in particular, respiratory and oral diseases and abscesses or bite wounds. Multivariate analysis revealed differences among geodivisions and across infection types.

Feline retroviral and heartworm infections are easily prevented, but difficult to treat. Despite availability of effective management protocols, compliance remains inadequate to reduce the prevalence of these infections. Improved use of preventive care and testing to identify and segregate contagious cats, particularly those at high-risk, is required to reduce the morbidity of these preventable infections.