

Social vulnerability assessment of dog intake location data as a planning tool for community health program development: A case study in Athens-Clarke County, GA, 2014-2016.

Jessie L. Dyer^{1*} and Lisa Milot^{2,3}

¹ Department of Small Animal Medicine and Surgery, College of Veterinary Medicine, University of Georgia, Athens, Georgia, United States of America.

² Athenspets, Inc., Athens, Georgia, United States of America.

³ School of Law, University of Georgia, Athens, Georgia, United States of America.

* Presenter

Email: Jessie.Dyer25@uga.edu

Abstract

A retrospective spatial analysis of dog intake data from an open admission animal shelter in Georgia was conducted to explore patterns within dog demographics and outcomes by pickup location or by the home address of the person who transferred ownership rights of the dog to Athens-Clarke County Animal Control during the period 2014-2016. Spatial analysis found the relationship between these intake locations and the final disposition of the dogs to be non-random, suggesting social and environmental influences on distribution. Statistically significant clusters were identified using the Getis-Ord G_i^* statistic. This study found statistically significant hot spots (i.e., areas with higher than expected values) and cold spots (i.e., areas with lower than expected values) for the intake of dogs with known health issues, physically neglected dogs, juveniles, and adults. Only statistically significant hot spots were found for socially neglected dogs and dogs whose final disposition was euthanasia due to severe health or behavioral issues. Given the close relationship between humans and dogs, this study explores the association of impounded dog clusters and a previously developed social vulnerability index. Social vulnerability is the product of social inequalities and inequalities related to the human-built environment. The social vulnerability index provides one tool for understanding the differences in characteristics of dogs from different intake locations. Results of this study indicate the utility of non-animal focused data as a planning tool for community programs and to allow for efficient allocation of limited resources for veterinary and other community outreach programs.

Keywords: dogs; animal welfare; animal control; companion animal; spatial analysis; human-animal interactions; animal welfare; social vulnerability; veterinary community program.