Dog ecology in a rural community with a history of rabies in Yucatan, Mexico.

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Introduction
The University of Florida (UF), College of Veterinary Medicine is developing a Certificate Program in International Veterinary Medicine. This program provides an opportunity for veterinary students to participate in delivery of veterinary services in a foreign country. The goal is to generate a new generation of veterinarians who understand not only disease issues, but also that there are distinct cultural, economical, political, educational, scientific and technological realities that contribute to the overall disease status of human/animal populations worldwide.

Canine and human rabies remains an important public health issue in Yucatan, Mexico. During the 1990’s, cases of rabies were diagnosed in dogs and humans almost every other year; most canine cases occurred in puppies less than 3 months of age. The anti-rabies program is conducted by the Mexican Ministry of Health and consists of public education, capture and elimination of stray dogs, and annual mass vaccination campaigns free of charge. In order to adequately plan rabies vaccination campaigns in dog populations, it is important to know the ecological structure of canine populations. In March 2001, UF veterinary students participated in a three-day vaccination campaign against rabies in dogs in Tunkas, a rural community of approximately 2,500 people, located about 70 km North-East from Merida, the capital city of Yucatan, Mexico.

Objective
To describe the ecological structure of a selected population of dogs in a rural community with a history of rabies in Yucatan, Mexico.

Materials and Methods
During vaccination, a structured-questionnaire was used to gather data of epidemiologic interest on selected population of dogs presented for vaccination.

Results and Discussion
A total of 300-400 dogs were vaccinated. Data from 214 dogs were successfully collected. All dogs were not spayed/neutered. Most dogs were less than 1 year-old (39%) or males (68%). Out of 109 dogs ≥ 1 year-old, 61 (56%) were identified by their owners as vaccinated in the previous 12 months. Based on information provided by dog owners, among dogs ≥ 1 year-old, lack of vaccination compliance was most commonly reported in dogs 1-2 year-old, compared to dogs 5+ year-old; female dogs; dogs born at home, compared to purchased dogs; and dogs owned by families with high school education, compared to dogs owned by families with no school
education. Identification of dog vaccination status by dog owners only (without use of vaccination certificates, vaccination tags, or vaccine titers) was a potential source of misclassification.

Conclusions
Ecology parameters associated with the canine population of Tunkas parallel those seen in other countries where rabies is endemic (eg, Ecuador, Peru, Philippines, Kenya). This field study highlights the need for implementation of animal control programs (eg, spay/neuter clinics) and assessment of vaccination policies in rural areas in Mexico by using objective, epidemiologic research methods.

References