Impact of a Bilingual Mobile Spay/Neuter Clinic in a U.S./Mexico Border City

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There are between 4 and 10 million dogs and cats killed annually in the United States. Although there are no accurate national estimates of the number of companion animals who are sterilized surgically. Approximately 26,000 companion animals are euthanized annually in El Paso County, Texas, located on the U.S./Mexico border. In an effort to determine if a readily available spay/neuter program would be cost effective and eventually help to lower the county’s euthanasia rate, a mobile spay/neuter clinic began operation for a 5-month period in 2004, using a volunteer veterinarian and paid staff. Sterilizations performed totaled 1,108: 959 dogs (372 males and 587 females) and 149 cats (50 males and 99 females). The per companion animal sterilization cost of $15.13 ($27.83 had the veterinarian been paid) was considerably cheaper than the rate of $57 per companion animal achieved by a local voucher program contracting with private veterinarians to perform reduced-cost sterilizations.

Estimates vary widely regarding the number of companion animals euthanized in the United States each year, principally because there is no national reporting system for these data. The most widely accepted estimates are that between 4
and 10 million dogs and cats are killed annually in this country (American Humane, n.d.; Humane Society of the United States, n.d.).

There is a paucity of research-based literature documenting the number of companion animals who are sterilized surgically in the United States. A cross-sectional study in Texas, based on data gathered from licensing agencies and animal shelters throughout the state, revealed that 27% of dogs and 33% of cats were sterilized (Mahlow, 1999).

In El Paso, TX, Animal Regulation and Disease Control (ARDC), operated by the El Paso City County Health and Environmental District (EPCCHED), euthanizes about 22,000 companion animals, primarily dogs and cats, each year. Other shelters in El Paso kill approximately 4,000, bringing the total number of euthanized animals to 26,000 and producing a rate of 34 euthanasias per 1,000 residents; that is double the national average for large cities in the United States (Clifton, 2005).

A number of interventions are typically recommended to reduce pet overpopulation, and most experts believe that intensive and targeted spay/neuter programs have the greatest impact on reducing the number of unwanted companion animals. There are many methods for operating companion animal sterilization programs. One such method is to deliver services directly to the public via a mobile spay/neuter clinic (MSNC). It is imperative, however, that services be provided in a culturally and linguistically relevant manner. In this article, we discuss the start-up and day-to-day operation of a bilingual MSNC, describe the results of the first months of operation, and conduct a budgetary analysis of operating expenses and per animal costs of sterilization.

BACKGROUND

El Paso is located on the U.S./Mexico border directly across the Rio Grande River from Ciudad Juarez, Mexico. The population of El Paso County is 715,000 (U.S. Census Bureau, 2000). The Hispanic population now constitutes 75% of El Paso County’s population and the county is projected to be 85% Hispanic by 2025. According to the 2000 Census, 75% of the residents of El Paso County speak Spanish at home.

Based on formulas from the American Veterinary Medical Association, the number of companion animals with guardians in El Paso county is calculated to be 144,000 dogs and 153,000 cats, producing a total pet population of 297,000 (American Veterinary Medical Association, 1997). It is difficult to find an accurate formula to calculate the number of stray dogs and cats, but ARDC statistics indicate there may be as many as 150,000.

ARDC estimates that it costs about $65 per nonhuman animal to euthanize pets in its shelter facility. This figure includes the cost of sending an animal control unit
out to pick up an animal, housing the animal for 3 to 4 days, euthanizing the animal, and transporting the body to the landfill. In 2004, ARDC killed 22,675 pets at an estimated cost of $1,474,000. This represented 76% of the total ARDC budget of $1,916,906.

In December 1999, both the El Paso City Council and County Commissioners Court passed a resolution that ARDC cease using euthanasia of adoptable dogs and cats as a method of pet population control in El Paso County by 2005. In 2000, the EPCCHED purchased a fully equipped MSNC for $120,000. In fiscal year 2003–2004, the City Council and County Commissioners allocated $100,000 to the EPCCHED’s budget to fund MSNC operations. A local nonprofit organization, Pets Alive–El Paso, Inc., formed a relation with the EPCCHED to obtain supplemental grant funding and to provide volunteers to help in the day-to-day operations of the MSNC.

Using multiple electronic databases, an extensive search for literature about MSNCs was conducted by Jane E. Poss, Mark Everett, and a health sciences librarian at the University of Texas at El Paso. This search failed to produce any articles in the mainstream literature about the operation, effectiveness, or cost of MSNCs that might provide a basis for comparison with the findings in this article.

**MSNC OPERATIONS AND PROCEDURES**

The EPCCHED operated the MSNC from February 14, 2004, through June 30, 2004. During this period, Bill Pearce, DVM, provided services at no cost in an effort to lower expenses and ensure the successful operation of the clinic. In addition to the veterinarian, the MSNC staff included one paid veterinary technician and one paid animal control officer who were bilingual and bicultural.

The MSNC targeted three low-income communities, including two colonias, situated on the outskirts of El Paso where the problem of pet overpopulation is most acute. According to the U.S. Department of Housing and Urban Development, a **colonia** is a community located within 150 miles of the U.S./Mexico border that lacks at least one of the following: (a) potable water supply; (b) adequate sewage and drainage systems; (c) decent, safe, and sanitary housing; or (d) paved roads (Alba, 2005).

The two colonias are located in far eastern and western areas of El Paso County, about 25 and 20 miles, respectively, from the center of the city. The third community, located in the northeastern region of the county about 10 miles from downtown, is not considered a **colonia**. The nearest veterinary clinics are located between 2 and 10 miles from the targeted communities.

On days of operation, the MSNC parked at community centers or neighborhood clinics that were well known to **colonia** residents. One of the community centers also served as a site for the Women, Infants, and Children Program.
Volunteers from Pets Alive–El Paso, Inc. were present each day the MSNC operated. A core group of four volunteers took responsibility for the development of the forms and educational materials, conducted daily registration of participants, provided continuity for clinic operations, and conducted training of new volunteers. One of the core volunteers was bilingual (English/Spanish).

The volunteers, in conjunction with the EPCCHED administrator and ARDC staff, determined the schedule for the clinic in advance. Once the schedule was set, volunteers contacted local media to begin advertising the dates. Advertising was via print media—primarily newspapers—and TV and radio announcements that local media provided at no cost. Spanish media (especially TV and radio stations) were used extensively. ARDC officers distributed flyers in both English and Spanish in the target communities for several days before the MSNC was scheduled to start operations. In addition, flyers were posted in local community centers and health centers.

On the mornings of operation, people were accepted to register their companion animals on a first-come, first-served basis. Only animals between the ages of 4 months and 7 years were eligible for surgery. Younger and older animals were referred to a local voucher program so that their surgeries could be performed in participating private veterinary clinics.

The MSNC has the capacity to hold 21 to 25 companion animals, depending on the cage configuration. All guardians whose pets could not be accommodated were given an appointment for a future date.

**REGISTRATION FORMS AND EDUCATIONAL MATERIALS**

All materials produced for the MSNC, including registration forms, appointment cards, instructions for postoperative care of animals, and general educational materials, were developed in English by a team comprised of the volunteers from Pets Alive–El Paso, Inc., the ARDC Director, EPCCHED Administrator, and the veterinarian. All materials were translated into Spanish by qualified interpreters and the final versions were printed in both English and Spanish.

The MSNC registration forms were developed to be printed on both sides of 8.5 x 11-in. card stock so that the form could be folded in the middle for easier use and later storage. The form was placed into a plastic sleeve on the front of each cage on the mobile unit to facilitate easy identification and tracking of each animal.

**RESULTS**

The initial operation of the MSNC lasted 5 months. During this time, the clinic operated 47 times, at an average of 2 to 3 times per week. The clinic was well received by citizens in all three targeted communities. On 90% of days, the van
was filled completely. On many occasions, more than 150 people showed up before 6 a.m. to have their animals sterilized. Because the MSNC could accommodate only about 25 animals per session, pet guardians were given an appointment for a future date.

Sterilizations were performed on 959 dogs (372 males and 587 females) and 149 cats (50 males and 99 females), for a total of 1,108 animals. The mean age of the dogs and cats sterilized was 2.3 and 1.3 years, respectively. The mean number of animals sterilized per session was 23.6. There was only one death—a dog that expired of unknown causes while waiting to enter the clinic van.

The most common breeds of dogs sterilized on the MSNC are shown in Table 1. Chihuahuas and Chihuahua mixes, very popular dogs in this region, outnumbered the next most common breed by 2:1. There were 414 large breed dogs (Chow, Pit Bull, Shepherd, Rottweiler, Doberman), accounting for 43% of the total dogs sterilized on the MSNC.

The budget for the MSNC appears in Table 2. The total per-session cost to run the MSNC during this project was $357 and the per-animal sterilization cost was $15.13. If the veterinarian had been paid, the per-session cost would have increased to $657. The per-animal surgery cost, based on 20 or 25 surgeries and calculated to include the veterinarian’s salary, is also shown in Table 2. These costs do not include the initial purchase of the MSNC.

**DISCUSSION**

The MSNC was a new endeavor for the EPCCHED. City and county officials wanted to determine if the clinic could be run as a cost-effective method of of-
ferring free spay/neuter services to the residents of this county with the goal of eventually reducing the number of animals killed at ARDC.

In El Paso County, the only other free spay/neuter program is a local voucher program run by Pets Alive–El Paso, Inc. This program pays reduced rates to local veterinarians in private practice to provide spay/neuter services to low-income El Paso County residents. Over the past 3 years, the average sterilization cost for this program was $57 per animal. The per-animal cost of sterilizing 25 animals on the MSNC ($29.26 if the veterinarian is paid and $14.29 if the veterinarian volunteers), was considerably lower. It was also cheaper to sterilize an animal on the MSNC than to spend $65 to euthanize the animal at ARDC. The cost savings of sterilization multiplies when the prevention of future litters is taken into account.

Citizen participation in the MSNC was greater than anticipated. Large numbers of people used the services nearly every time the clinic went out, especially when the publicity efforts were well coordinated and timely. For those who could not be accommodated on a given date, we were able to schedule future appointments, except near the end of the 5-month period when future operation of the MSNC was in question.

The MSNC did not operate on a regular basis after July 2004 due to temporary budgetary constraints. Both the city and the county fund the EPCCHED and—during the budget hearings in 2004—discussions were underway concerning the proportionate contribution of each governmental entity. Once these issues were resolved, a steady funding stream was established to ensure future operations. In August 2005, the MSNC began operating again on a regular basis.

The MSNC provided specific benefits for companion animals and their guardians. For the majority of animals sterilized on the clinic, this was their first encoun-

<table>
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<th>Units</th>
<th>Vet Paid</th>
<th>Vet Volunteered</th>
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<tr>
<td>Per animal cost</td>
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*Gasoline cost based on 40 miles per day × $4.00 per gallon (Animal Regulation and Disease Control units mileage = 20 miles/gallon; mobile clinic mileage = 5 miles/gallon).
ter with veterinary care. Many guardians told the volunteers that they could not afford to take their animals to a veterinarian. Because the MSNC operated in low-income communities, sterilization services were made more accessible to guardians who lack dependable transportation. Because services were free, the barrier presented by the cost of private veterinary care was removed. Having bilingual/bicultural staff and presenting all advertising, registration, and educational materials in both English and Spanish enabled all citizens of this border county, which is 75% Hispanic, to make use of the services. The contribution of local Spanish-language media in providing public service announcements about this program was invaluable.

Public acceptance of the clinic was excellent as evidenced by a mean of 23.6 animals that were sterilized per session on a MSNC with a 25-cage capacity. Based on the results of the first 5 months of operation, the MSNC was a cost-effective method of providing free sterilization services for companion animals in El Paso County.

Given the extent of companion animal overpopulation in El Paso, the overall impact of the MSNC is limited. In a county with an estimated 297,000 owned dogs and cats and 150,000 strays, sterilizing 1,108 animals in 5 months obviously is a small contribution. Multiple other approaches to increasing the spay/neuter rate are needed, including providing public education campaigns about the importance of spay/neuter, increasing the number of free or low-cost sterilizations provided by private veterinarians, expanding spay/neuter voucher programs, and offering free or low-cost sterilizations at publicly funded clinics.

ACKNOWLEDGMENT

All bilingual materials developed for this program, including registration cards and postoperative instructions, will be mailed to readers who request them.

REFERENCES