



Chapter 4

Humane Societies and Rescue Groups

The first private American animal shelters were established in the latter half of the nineteenth century. At the time, people on the streets of major cities regularly encountered roaming, hungry dogs and cats and the violent means used to dispatch them in the name of public health.²³⁰ In Manhattan, dogs were placed in iron cages that were lowered into the East River; in Brooklyn, dogs were clubbed to death each morning.²³¹

In these early years, the primary concern of humane societies was to prevent cruelty, not to preserve life. Henry Bergh, the founder of the American Society for the Prevention of Cruelty to Animals (ASPCA) characterized the miserable life led by stray animals as the real cruelty, commenting that “it is more a question of death than cruelty and I am free to confess that I am not quite satisfied in my own mind whether life or a speedy dissolution is most to be coveted.”²³² Consistent with the

anti-cruelty ethic of humane organizations at the time, their central concern was not the large number of unwanted animals that were being destroyed, but the method of destruction and its impact on the animals and shelter staff.²³³ So, for instance, the ASPCA's annual report for 1895 reported that it was considered to have been a successful year because more animals were euthanized in its shelters that year than in prior years.²³⁴ While the question of "how" animals were killed has been a major concern of humane organizations since their earliest days, the question of "how many" did not become a major issue until the last third of the twentieth century.²³⁵

Attempts to increase the number of cats and dogs adopted from shelters became more and more common in 1950s.²³⁶ Less than 1% of the cats and dogs that entered shelters operated by the ASPCA were adopted in 1946; by 1954, the percentage had grown to 6.8% and by 1965 to 14%.²³⁷

The percentage of sheltered animals that were placed in new homes grew throughout the 1970s and 1980s until by the time the National Shelter Survey was completed in 1998, 32% of dogs and 29% of the cats that entered shelters were adopted.²³⁸ At that time, cats and dogs acquired from animal shelters had come to make up more than 11% of all the cats and dogs that entered American households each year.²³⁹

As they worked to increase the quantity of adoptive placements, humane organizations also attempted to ensure their quality by establishing adoption guidelines and criteria that included the following:

- ◆ the pet would be provided with appropriate veterinary care;
- ◆ the pet's social, behavioral, and companionship needs would be met;
- ◆ the pet would be provided with a livable environment, including appropriate food, water, shelter and exercise;
- ◆ the pet would be spayed or neutered; and
- ◆ the pet would be provided with adequate identification at all times.²⁴⁰

By scrupulously following these guidelines when making adoptive placements and increasing their market share of new pet acquisitions, humane organizations sought to become "ambassadors of the humane ethic" to their communities and to set standards for responsible pet care.²⁴¹ To be effective ambassadors, though, humane organizations must meet the standards that they themselves have set for pet caretakers by following the policies and procedures that are discussed below.

I. Pre-Release Sterilization Of Intact Animals

In the 1970s, humane organizations began to require all people adopting intact shelter pets have them sterilized as part of responsible pet ownership.²⁴² They attempted to enforce this mandate through various strategies, such as taking deposits and requiring the owners to enter into sterilization agreements, but the compliance rate of adopters with the post-adoption sterilization requirement averaged only 60%;²⁴³ In one Louisiana shelter that collected compliance data in the late-1980s, it was only 41%.²⁴⁴

The advent of pre-pubertal pet sterilization in the 1990s made it possible for the first time to sterilize all cats and dogs at the time of their placement. This has also made it possible to compare the future intake rates of shelters that release intact pets to adoptive homes with sterilization agreements to those that sterilize all intact pets upon or before their placement.

As discussed in the introductory chapter (Pages 12-13), after a pre-release sterilization law was enacted in California, shelter intakes in the six largest counties with county-wide animal control shelter data dropped by 10% in the first five years. In the five years before the law was passed, when intact pets were placed with the posting of a neutering deposit, shelter intakes in these counties had increased by 8.6%.

Pre-release sterilization of intact cats and dogs, then, is associated with lower future intake rates. Not only will a placement agency's failure to adopt a sterilization-at-adoption policy forfeit an opportunity to increase local pet sterilization rates, it will also tend to increase the rate at which its adoptive placements fail, because being sexually intact has been identified as one of the leading risk factors for owner relinquishment of cats and dogs.²⁴⁵

II. Evidence-Based Adoption Counseling and Support Programs

Using retention rates as a criterion, many adoptive placements made by shelters are unsuccessful. A 1992 survey found that 20% of dogs adopted from a California shelter were no longer in their adoptive homes after six months.²⁴⁶ This was comparable to the rate at which dogs and cats adopted through humane groups at special off-site events and in pet supply stores were no longer in their adoptive homes after one year.²⁴⁷ Dogs adopted from an Indiana shelter in the mid-1990s were at greater risk

of relinquishment than those acquired from all other sources studied (i.e., those purchased from a breeder, pet store, or private owner; those born in the adopter's home or adopted as a stray) and were at six times greater risk of relinquishment than those purchased from a private owner or breeder at a cost of more than \$100.²⁴⁸

Relinquishment studies have identified the demographics and attributes of adopters that are associated with the greatest risk that a pet will not be successfully retained in an adoptive home. In many cases, the increased risk of relinquishment arises from a knowledge deficit that can be effectively addressed through a pre-adoption counseling program.

Placements in the homes of first-time pet owners are associated with a greater risk of failure than other placements. A survey of dog and cat adoptions from San Francisco-area shelters in the early 1990s found that adopters who had not owned a pet before made up 62% of those who had failed to retain an adopted pet in their home for at least six months, a significantly higher rate of failed placements than that of adopters who had previously owned pets.²⁴⁹

The increased rate at which dogs adopted by first-time pet owners were returned to a shelter may arise from those owners having unrealistic expectations about the amount of work required to care for a pet or the pet's role in a family. Underestimating the amount of time required to care for a pet is associated with a significantly greater risk of relinquishment in both dog²⁵⁰ and cat owners.²⁵¹ Nearly one-third of all canine relinquishments to an Indiana shelter in the mid-1990s were attributed

“When the benefits of ownership are outweighed by the liabilities or problems of that ownership, then the risk of relinquishment increases. Almost twice as many respondents who obtained a dog from a shelter reported that the amount of effort required in caring for the dog exceeded their expectations compared to those sourcing dogs elsewhere. The success rate of animal adoptions is enhanced when new owners have realistic and sensible expectations of the time, expense and effort required by the pet. The use of pre-adoption counseling to adjust adopter expectations may be of benefit. Such counseling would assist adopters in making an appropriate selection in terms of size, activity level and genetic predisposition for their lifestyle and therefore reduce the risk of later relinquishments (estimated to account for 13% of such relinquishments).” (Reference citations omitted.)

Marston LC & Bennett PC (2003). Reforging the bond—towards successful canine adoption. *Appl. Animal Behavior Science* **83**: 231-232.

to the owner having discovered that caring for the dog was more work than expected.²⁵² And people who had adopted a dog from the shelter were significantly more likely to find that pet care was more work than they expected compared to those who had acquired a dog from another source.²⁵³

Having unrealistic expectations about a pet's role in a family is also associated with an increased risk of relinquishment, especially for cats. Adopters from an Indiana shelter who expected a cat to act as a companion to household members were at significantly greater risk of relinquishing the cat than those who did not expect the cat to have any particular role in the household.²⁵⁴ A 1992 study of cats and dogs adopted from San Francisco-area shelters found that parents who expected an adopted pet to keep their children busy or teach them love were also at greater risk of relinquishing the pets than adopters who did not expect an adopted pet to fill those roles.²⁵⁵

Research also sheds some light on the substantive pre-adoption counseling that may help reduce the rate of failed placements. The knowledge deficits that are associated with the highest risk of relinquishment are different for dog- and cat-owners. Dog owners would likely benefit from counseling about the value to their pet of receiving frequent veterinary care and participating in a dog training class.²⁵⁶ For cat owners, the greatest knowledge deficits are a failure to appreciate the protective benefits of maintaining a cat indoors and having unrealistic expectations about the cat's role in the adoptive household.²⁵⁷ Information about the benefits of pet sterilization, the amount of work necessary to care for a pet, and the extent to which problem behaviors, such as inappropriate elimination, can be modified would likely be of benefit to both prospective dog and cat adopters.^{258, 259}

Effectively communicating all of the information that may prove critical to the success of an adoptive placement may well require more time than shelters commonly set aside for pet selection and pre-adoption counseling. People who adopted dogs and cats from an Indiana shelter reported spending a median of two hours selecting a pet; three-fourths indicated that it would have been helpful to spend more time with shelter staff.²⁶⁰ Because having unrealistic expectations about the role of a pet in the household or the amount of work required to keep a pet are associated with a significantly increased risk that a placement will fail, as discussed above, much of the necessary counseling will need to take place prior to pet selection.

Post-adoption counseling can be critical, too. A good adoption follow-up program

is often a key factor in the long-term success of adoptions.²⁶¹ Pet behavior problems that arose after adoption accounted for more than one-third of all reasons given for returning a cat or dog to a Midwestern shelter in 2005.²⁶² Relinquishment data from the National Council's Household Survey suggest that the bond between pet and owner is most fragile during the first six months, underscoring the importance of advice and support during this period.²⁶³ Follow-up contacts can lead to effective interventions for problems that have arisen, such as referral to a veterinarian or a dog training class. A general recommendation for the timing of follow-up contacts with new adopters is:

- ◆ First contact within 3 days of pet's arrival in the home;
- ◆ Second contact 3 weeks after placement; and
- ◆ Final contact 3 months after placement unless additional contact seems necessary.²⁶⁴

For adopters at increased risk of a failed placement—such as first-time adopters—monthly telephone contacts to inquire about behavior problems and remind owners of the availability of interventions may be worthwhile.

To assess the success of an adoption program, it is necessary to survey adopters six months after placement to determine whether the pet has been retained in the home. The results of post-adoption surveys can be used to regularly assess the efficacy of pre- and post-adoption counseling programs and address the types of placements that are associated with the highest rates of failure.²⁶⁵

III. Puppy Socialization and Dog Training Classes

While studies suggest that dogs acquired from shelters are at greater risk of relinquishment than those acquired from other sources, as discussed above, other research suggests that puppy socialization classes and dog training classes can significantly reduce canine relinquishment rates.

As discussed earlier (Page 49), in a 2003 study of puppy adoptions from a Minnesota shelter over a seven-year period, puppies that had participated in a post-adoption puppy socialization class at the shelter were more frequently retained in their adop-

tive homes than either puppies that did not participate in a puppy socialization class at all or those that participated in a socialization class somewhere outside the shelter.²⁶⁶ Owner education was a major component of the classes provided at the shelter—including the provision of information about canine development and learning theory and instruction in the use of motivation and restraint to manage puppy behavior²⁶⁷—suggesting that owner education may play a significant role in the success of a puppy socialization program.

**Population Attributable Risk (PAR)
factors for relinquishment of dogs**

Not participating in dog training class	67%
Infrequent veterinary care	66%
Amount of work greater than expected	33%
Dog not sterilized	31%
Inappropriate elimination	19%

Patronek, GJ (1996). Promoting successful pet ownership: challenges for shelters and veterinarians. Proceedings Shelter Veterinarian Educational Program. Denver, Colorado: American Humane Association, 3.

This study also found that the window of opportunity for an effective puppy socialization class was small: Puppies that attended socialization classes at four months of age or older were no more likely to be retained in their adoptive home than those that did not attend any puppy socialization class at all.²⁶⁸ Concerns about participation in a socialization program before puppies have completed an immunization series against parvovirus can be mitigated by rigorously following a prophylactic protocol.^{269, 270} While puppies’ immune systems are developing during their early months, the combination of maternal immunity, primary vaccination, and appropriate precautions makes the risk of infection relatively small compared to the chance of death from a behavior problem and subsequent relinquishment if socialization is deferred beyond the optimal period.²⁷¹

Research consistently shows that participation in dog obedience classes is also associated with pets having fewer and less severe behavior problems²⁷² and a significantly lower risk of relinquishment.²⁷³ Dogs that had not participated in obedience classes after being acquired were at five times greater risk of being relinquished to an Indiana shelter than those that had.²⁷⁴

As with puppy socialization programs, there is some evidence that the protective benefit is increased when dog training classes include an owner education component. Most training classes are not designed to address behavior problems that may have arisen and as a result tend not to affect them; consequently, obedience training coupled with counseling about problem behaviors can be more protective than obedience training alone.²⁷⁵

Shelters may benefit from establishing their own training classes, instead of referring adopters to programs operated by others. This would allow them to ensure that the classes are based on the most current relinquishment studies, a research-based approach that other obedience-oriented programs may not follow. In addition, by having its own program, a shelter can also provide training to dogs available for adoption, which is associated with both an increased likelihood of being adopted²⁷⁶ and being successfully retained in the adoptive home.²⁷⁷

IV. Offsite Adoption Programs

The adoption of pets at a location other than an animal shelter raises the concern that people may be more likely to acquire an animal on impulse and later relinquish or abandon the animal. Limiting the site of adoptions exclusively to shelters, however, can result in some inconvenience to prospective adopters who live a distance from a shelter and exclude those who are reluctant for whatever reason to visit a shelter.

Preliminary research suggests that the retention rates of off-site adoptions may not be significantly different from adoptions that take place at a shelter. A 2002 study that compared adoption outcomes of cats and dogs adopted at an Arizona shelter to those of pets adopted at a special off-site adoption event in New Mexico and those of pets adopted at various PetSmart locations in the United States found that the one-year post-adoption retention rates were similar for adoptions made in all the venues.²⁷⁸

Offsite adoptions can substantially increase adoption rates. More than 400,000 dogs and cats were placed through adoption events at PetSmart stores in the United States in 2007.²⁷⁹ In 2005, off-site adoptions accounted for 39.1% of all the dogs and cats adopted in the State of Utah.²⁸⁰ This helped increase the statewide pet adoption rate there to 10.5 Pets Per Thousand People (PPTP),²⁸¹ almost 40% above the national average of 7.7 PPTP.²⁸²

Survey data also suggest that offsite adoptions made through veterinary clinics could increase substantially. The National Council's Household Survey found that only 1.2% of all the dogs and .5% of all the cats acquired by U.S. households had been placed through a veterinary clinic.²⁸³ A 1992 study of cat and dog adoptions made through veterinary clinics in the San Francisco area found that pets placed through the clinics were significantly more likely to be in the adoptive home after six months than those placed by local humane societies.²⁸⁴

Increasing adoption rates through offsite adoptions can help reduce present and future shelter euthanasia rates, but only if those placements follow the best practices of adoptions made at shelters: Adopters should be carefully matched with the appropriate pet for their family and provided with pre- and post-adoption counseling and assistance. Of course the pets they adopt should be sterilized and microchipped prior to placement.

V. Pet Identification Program

Cats that enter animal shelters in the United States are much more likely to be euthanized than dogs. The difference lies almost entirely in the higher rate at which dogs are reclaimed by their owners. Animals admitted to the shelters included in the 1998 National Shelter Survey were almost evenly split between cats and dogs,²⁸⁵ and an almost equal number of each was adopted.²⁸⁶ Almost two-thirds (65%) of all the cats admitted to these shelters were ultimately euthanized, however, compared to just over half (52%) of the dogs.²⁸⁷ The difference in outcomes was due almost entirely to the higher rate at which dogs were reclaimed by their owners: 24.5% of stray dogs were reclaimed by their owners, compared to only 5.5% of stray cats.²⁸⁸

Part of the difference in redemption rates between dogs and cats is likely due to the larger number of cats that are free-roaming and do not have owners to reclaim them. The lower rate at which owned cats are provided with identification by their owners is likely to be a factor, too. Studies of lost pets in Ohio found that those with some form of identification were recovered more often by their owners than those with no identification, but that only 19% of the lost cats had been wearing a tag or had a microchip, compared to 48% of the lost dogs.^{289, 290}

When placing dogs and cats in a new home, shelters and rescue groups cannot eliminate all future risks the adopted pets may encounter. They can, however, ensure

that all adopted pets have been immunized against major health threats. They can increase the likelihood that the adoptive placement will be successful by ensuring that all intact adoptees are sterilized before their placement. And they can increase the likelihood of an adopted pet that becomes lost being successfully returned home by microchipping all adopted pets.²⁹¹ In the same way that it is no longer the best practice for shelters and rescue groups to delegate the responsibility for having intact pets sterilized to the adopter, data regarding the protective benefit of providing a dog or cat with identification establish that it is no longer the best practice to place the responsibility of providing a pet with permanent identification on the adopter.

Dogs with identification tags are significantly more likely to be recovered than those without tags,²⁹² so all adopted dogs should be furnished with a collar and an identification tag with the adopter's contact information. In addition, they should be microchipped as a back up in case they lose their collar or tag.²⁹³ Due to the widespread belief that cats could be injured if wearing a collar or would not tolerate one,²⁹⁴ it may be more practical to microchip all adopted cats as a primary form of identification.²⁹⁵ Even though deficiencies in the microchip registration system undermine its potential, the high rate at which microchipped cats and dogs are returned to their owners show that microchipping is a worthwhile way to provide pets with permanent identification.²⁹⁶

VI. Shelter Medicine Program

Humane organizations recognize the importance of providing appropriate care for pets and reflect that in their adoption criteria: They decline to place a pet unless there is a reasonable likelihood that the caretaker will see that the pet receives adequate veterinary care in the future.²⁹⁷ Animals that are living in a shelter have an even more critical need for veterinary care than pets living in households. Infectious diseases are common in shelters and can result in death, either directly or through the use of euthanasia to limit the spread of infectious disease.²⁹⁸ The greater population density of shelters increases the contact rate between animals and the likelihood that asymptomatic carriers of disease will be present, shedding disease.²⁹⁹ Indeed, the eradication of infectious diseases is not an attainable goal for animal shelters.³⁰⁰

Given these factors, access to adequate veterinary care is critical, both to the health of individual animals in shelters and the population as a whole. Any attempt to manage the health of a shelter population without adequate information regarding

the magnitude of problems and the response to interventions is like treating a very sick person without diagnostic or follow-up testing.³⁰¹ Such information is of little value, of course, except to someone with the specialized skills and training needed to interpret it, a veterinarian trained in shelter medicine.

Not only can shelter veterinarians contribute unique skills and training that improve the health of shelter animals and reduce the incidence of shelter-acquired disease, their evidence-based approach can improve the effectiveness of the entire sheltering system. Until recently, veterinarians were “conspicuously absent” from the field of animal sheltering³⁰² and the impact of many interventions employed

to reduce population control euthanasia rates has not been measured or analyzed scientifically.³⁰³ The research that has been undertaken to date has contradicted assumptions long accepted as shelter dogma, such as that animals given as gifts are at greater risk of relinquishment³⁰⁴ or that animals adopted at special off-site adoption events or at retail stores face a heightened risk of being relinquished.³⁰⁵ In addition to assessing the effectiveness of various strategies to improve the health of shelter animals, shelter medicine programs can employ case-control studies and statistical analysis to measure the impact of different adoption counseling programs or pet behavioral strategies on post-adoption retention rates. In sum, the consistent application of veterinary principles of population health can provide a powerful tool not only to keep shelter animals alive, but also to help them leave the shelter alive.³⁰⁶

Benefits of Data Collection and Analysis in Animal Shelters

- ◆ Identification of baseline disease/problem levels and tracking patterns;
- ◆ Identification of risk factors for disease, adoption, euthanasia and other outcomes;
- ◆ Development of intervention strategies;
- ◆ Assessment of interventions;
- ◆ Identification and effective response to outbreaks and emerging problems;
- ◆ Comparison between shelters/establishment of goals and benchmarks;
- ◆ Budgeting and justification of programs and funding; and
- ◆ Education of the public, volunteers, staff and colleagues.

Hurley K (2004). Implementing a population health plan in an animal shelter. Shelter Medicine for Veterinarians and Staff, L. Miller and S. Zawistowski (eds.) Ames, Iowa: Blackwell Publishing, 212-213.

VII. Evidence-Based Shelter Admission Policies

Until recent years, most traditional humane societies employed an “open-door” admission policy in which they accepted any dog or cat that an owner sought to relinquish, even though the shelter was at capacity and the admission of another animal would require the euthanasia of an animal already at the shelter. For open-admission shelters, it is “an article of faith, source of pride, and guide for action that the shelter will never turn an animal away.”³⁰⁷ An anti-cruelty ethic underlies the open-admission philosophy as one of its leading proponents, Phyllis Wright, explained in an article she wrote in 1978:

“I know it is difficult to put animals to sleep. I’ve put 70,000 dogs and cats to sleep and I’m aware of the trauma. But I tell you one thing: I don’t worry about one of those animals that was put to sleep. And I worry a great deal about dogs and cats that have to spend their lives shut in small cages or runs, or left chained to the back porch day-in and day-out, without affection or companionship. Being dead is not cruelty to animals. Being half alive is.”³⁰⁸

This rationale is based on an assumption that if a shelter declines to admit all animals that owners seek to relinquish, so many would suffer a “fate worse than death” through neglect, abuse, or abandonment that on balance, an open-admission policy is ethically justified even if admissions exceed shelter capacity and every new admission will require that an animal already in the shelter be euthanized.³⁰⁹

One policy analyst has pointed out that an open-admission policy is based on untested assumptions that “trade off a vast number of certain deaths to ward off an indeterminate amount of speculative suffering.”³¹⁰ He points out that while the suffering of strays is often far from hypothetical, few guardian-accompanied animals suffer “fates worse than death” and as a result, it cannot be reliably assumed that the admission of every animal a guardian seeks to relinquish is in the best interests of that animal or the other animals already in the sheltering system.³¹¹ He suggests that an individualized admission assessment be made whenever a guardian seeks to release an animal to a shelter and that the release not be accepted unless there is a “clear and present danger” that the animal will be abused or abandoned if not admitted to the shelter.³¹²

Others have questioned whether another assumption on which an open-admission rationale is based—that all homeless animals lead lives of such deprivation and risk that their admission to a shelter and the possibility of being placed in a good home outweigh the risk of being euthanized in the shelter—can reliably be applied to unsocialized free-roaming cats. The likelihood that unsocialized cats can be placed in a home is so remote that the only humane justification for admitting them is that the misery of their lives is worse than death.³¹³ Data that have been collected on feral cats sterilized at a Florida spay/neuter clinic showed, however, that although all the cats were homeless, their general body condition was adequate and that less than one-half of one percent had to be euthanized for humane reasons.³¹⁴ This rate of medical euthanasia was consistent with that of seven other large scale trap-neuter-return programs in the United States, in which .4% of the trapped cats were euthanized because of debilitating conditions.³¹⁵ After staff at a New York shelter evaluated the health of all the feral cats brought to them and found that 73% were in excellent health, the shelter discontinued its policy of admitting healthy feral cats for euthanization.³¹⁶

Data from formerly open-admission shelters that began to limit their acceptance of pets owners initially wanted to relinquish suggest that the adoption of limited-admission policies can reduce overall shelter intake rates, even when other open-admission shelters serve the area. After the Jacksonville Humane Society changed from an open-admission to a limited-admission policy on October 1, 2005, admissions dropped by 9,747 during the next 12 months, while intakes at the remaining open admission shelter, Jacksonville Animal Care and Control, increased by only 5,042 animals.³¹⁷ Overall, shelter admissions in the area served by the shelters dropped by 17.3% during the first year after the humane society modified its admission policy.³¹⁸ Staff at the shelter found that after providing assistance to caretakers who originally sought to surrender their pets, 40% reconsidered and decided to keep the pet.³¹⁹ The reduction in overall intakes at area shelters continued during the following two years:

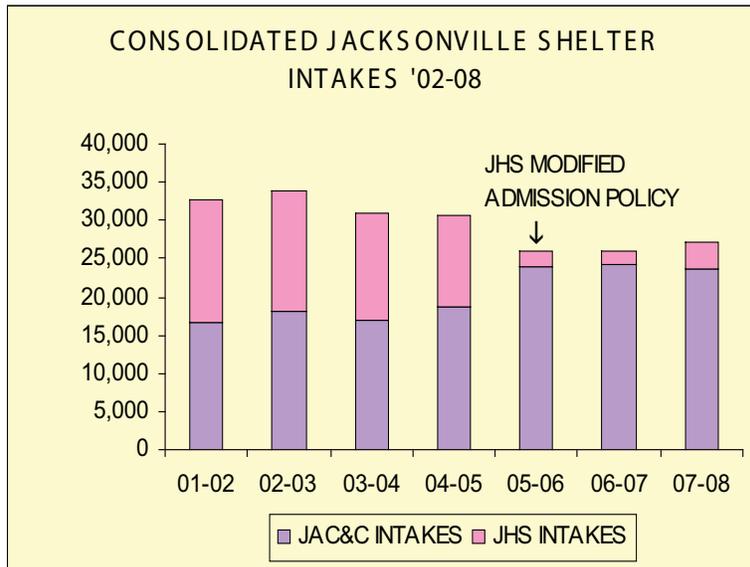


Figure 13.³²⁰

The limited-admission policy adopted by the Jacksonville Humane Society was modeled after one adopted by the Richmond SPCA on January 1, 2002. The following year, total admissions at the Richmond SPCA and Richmond Animal Control—which retained its open-admission policy—dropped by 21%.³²¹ This decline in shelter admissions continued for the following three years:

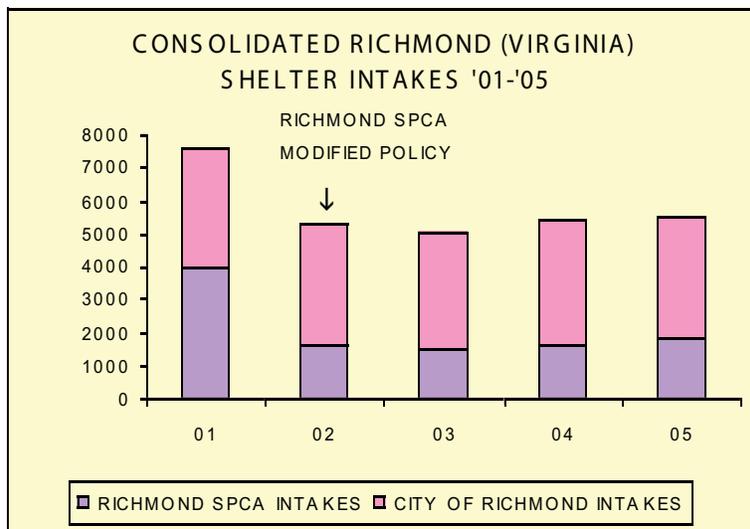


Figure 14.³²²

An open-admission policy necessarily results in substantial costs, both for the shelter and the animals that are admitted. The justification for incurring these costs rests on the assumption that, overall, the animals admitted would suffer worse outcomes if they had not been admitted. The rationale of a limited-admission policy also rests on an assumption: that individualized assessments of the risks and benefits which would result from not admitting an animal can be made with sufficient accuracy to justify not admitting every animal that an owner seeks to relinquish or that does not have a home. The stakes are so high that a shelter must subject its admission policy to rigorous, evidence-based scrutiny. Only then can it rest assured that it is advancing its worthy mission to protect animals and prevent their suffering.

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- ²³² Beers, For the Prevention of Cruelty, 73.
- ²³³ *Ibid.*, 74.
- ²³⁴ Zawistowski et al., Population dynamics, overpopulation and the welfare of companion animals, 194.
- ²³⁵ Zawistowski S & Morris J (2004). The evolving animal shelter. Shelter Medicine for Veterinarians and Staff, L. Miller and S. Zawistowski (eds.) Ames, Iowa: Blackwell Publishing, 5.
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- ²⁴¹ Report on Adoption Forum II, 20.
- ²⁴² Moulton et al., The role of animal shelters in controlling pet overpopulation, 1173.
- ²⁴³ sheltervet.org/documents/Position%20Statements/Timing%20of%20Spay%20Neuter.pdf, 1.
- ²⁴⁴ Alexander SA & Shane SM (1994). Characteristics of animals adopted from an animal control shelter whose owners complied with a spaying/neutering program. *J. Am. Vet. Med. Assoc.* **205** (3): 474.

- ²⁴⁵ The Association of Shelter Veterinarians' Spay-Neuter Task Force (2008). The Association of Shelter Veterinarians veterinary medical care guidelines for spay-neuter programs. *J. Am. Vet. Med. Assoc* **233** (1): 75.
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- ²⁴⁹ Kidd et al., Successful and unsuccessful pet adoptions, 551.
- ²⁵⁰ Patronek et al., Risk factors for the relinquishment of dogs, 577.
- ²⁵¹ Patronek GJ, Glickman LT, Beck AM, McCabe GP, & Ecker C (1996). Risk factors for relinquishment of cats to an animal shelter. *J. Am. Vet. Med. Assoc.* **209** (3): 587.
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- ²⁵³ *Ibid.*, 577.
- ²⁵⁴ Patronek et al., Risk factors for the relinquishment of cats, 585.
- ²⁵⁵ Kidd et al., Successful and unsuccessful pet adoptions, 558.
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- ²⁶² Shore ER (2005). Returning a recently adopted companion animal: adopter's reasons for and reactions to the failed adoption experience. *J. Appl. Animal Welfare Sci.* **8** (3), 195.

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