Chapter 2

WORKING SMARTER:
THE POWER OF DATA AND TARGETED PROGRAMS

"One thing I have learned in a long life: all our science, as measured against reality, is primitive and childlike—and yet it is the most precious thing we have."

Albert Einstein

Barbara Carr led the way forward in New Hampshire by using shelter statistics to design preventive programs. Before that, our programs had been based on anecdotes, impressions, and conventional wisdom, which—as we shall see throughout this book—are often mistaken.

Throughout the 1980s, about 12,000 cats and dogs lost their lives in New Hampshire shelters every year, year in and year out. Other states in our region had done better. In 1992, four of the other five New England states had a lower per-capita shelter euthanasia rate than we did.

Kittens made up almost one third of the 9,829 cats that were put down in our state's shelters in 1993. Often people who brought a litter of kittens to Barbara's shelter said they couldn't af-

ford to keep the kittens or to have the mother spayed. To find out how common this was, in early 1992 staff began asking people who brought kittens to the shelter a few questions, including their household income. They found out that almost half of the kittens turned in to the shelter came from poverty-stricken households even though at the time only 12% of families in the county were living in poverty.

Barbara Carr at the Chain of Collars Display

It wasn't as if we hadn't had reduced cost spay/neuter programs in New Hampshire for many years. We had. Low-cost spay/neuter programs like the Friends of Animals Program and the Spay/Neuter Assistance Program (SNAP) operated by the New Hampshire Federation of Humane Organizations and the New Hampshire Veterinary Medical Association distributed hundreds of low-cost vouchers every year. While these vouchers allowed people to have their dogs and cats sterilized at great savings—about half the full cost—Barbara discovered that this was still more than people living in poverty could afford. This led us to ask legislators to introduce a bill in the State Legislature that would enable people living in poverty to have a cat or dog spayed or neutered for just $10.

After the program started in the summer of 1994, shelter intakes throughout the state began a steep decline that continued for the next six years. By 2000, the statewide euthanasia rate had dropped by more than 75%. The aggressive public education and awareness campaign described in the first chapter probably helped drive down shelter euthanasias in the state, too, but the creation of an affordable spay/neuter program for people living in poverty likely had a greater impact. We started the public awareness campaigns in 1991, but shelter euthanasias didn't begin dropping until a few years later, after the state-funded spay/neuter program began operating and dropped sharply after that.

**GETTING TO ZERO:
USING DATA TO DESIGN EFFECTIVE PROGRAMS**

To be of value, information must be useful. If it can't be applied to make programs more effective, it has no value:

INFORMATION – APPLICATION = 0

If we're going to depend on information to design more effective programs, it must be reliable. The most reliable data are objective and measurable. That's why community-wide shelter intake, adoption, redemption, and euthanasia statistics are the best way to evaluate the progress a community is making.

The best metrics take into account the human population by comparing raw shelter statistics to a community's current human population, called the Pets Per Thousand People (PPTP) rate. This makes it possible to compare a community's intake, adoption, redemption, and euthanasia rates to those of other communities and to take into account any growth or decline in the human population. A good example of a scalable metric is the "e-metric" developed by the No More Homeless Pets in Utah Program. It's calculated by dividing the total number of cats and dogs euthanized in shelters throughout the state each year by the current statewide human population.

The most valuable information is animal-centric. Like the e-metric, it tracks the outcomes for animals. Metrics that track other outcomes, like a community's Live Release Rate, can be misleading. For instance, if 5,000 cats and dogs had entered a community's shelters in a year and 1,500 had been euthanized, its Live Release Rate would be 70%. But if 10,000 had entered its shelters and 3,000 been euthanized, the community's Live Release Rate would also be 70%, even though twice as many animals had lost their lives in its shelters.

To prevent something from happening, you need to understand how it happens and why. Following Barbara's lead, we used shelter intake data and information from research studies to design

several programs. After we learned about a 1992 Massachusetts study which found that more than four out of five litters of kittens and puppies were born to mothers that had at least one litter before being sterilized, we set up a Prevent-A-First-Litter public information campaign modeled after the Humane Society of the United States' (HSUS') "Be a P.A.L.—Prevent-A-Litter" program launched several years earlier. Most veterinarians were happy to make "Kittens Have Kittens" posters that we had gotten from Esther Mechler of SPAY/USA available to their clients.

> **GETTING TO ZERO:**
> **MODIFYING THE FACTORS WHICH INCREASE THE RISK**
> **THAT AN ANIMAL WILL BECOME HOMELESS**
>
> Some factors that increase the risk an animal will become homeless cannot be changed easily, such as a caretaker's poor health or financial difficulties.
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> Other factors that increase the risk—such as an animal being sexually intact or having had no training or other behavioral assistance—can be changed.
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> To be cost-effective, decisions about which shelter overpopulation programs to start and which to prioritize need to be based on information about the factors that protect an animal from becoming homeless and how much it would cost to modify them. So, for example, even if getting a dog sterilized only reduced the risk that the dog would be relinquished to a shelter half as much as putting the dog through a training program, the sterilization program would still deserve a higher priority if getting the dog sterilized only cost one-fourth as much as putting it through the training program.

After researchers found in 1997 that most people who surrendered pets to a Massachusetts shelter had not given up their pets for casual or trivial reasons, shelters in New Hampshire began developing programs that helped people keep their pets or find homes for them without bringing them to a shelter. As will be discussed in greater detail in Chapter 8, one shelter developed a Re-homing Service for Valued Pets (RSVP) Program in which staff provided support and assistance to people who contacted the shelter about relinquishing a pet. Depending on the circumstances, they provided information to caretakers about behavior modification training for their pets, helped them re-home the pets on their own, referred them to a breed rescue group, or put their pets on a

waiting list for admission to the shelter when space became available. The shelter's goal was to stop euthanizing animals in their shelter to make room for other animals or because of a treatable illness by the year 2000. They reached the goal a year early, in 1999.

GETTING TO ZERO:
THE PREVENTION QUOTIENT

As will be more fully discussed in the next chapter, well-designed shelter overpopulation programs achieve a reasonable balance between the resources spent to help animals that have already become homeless and those spent to prevent them from becoming homeless in the first place. This can be expressed as a Prevention Quotient (PQ):

$$\frac{\text{MONEY SPENT ON PROACTIVE PROGRAMS TO PREVENT ANIMALS FROM BECOMING HOMELESS (E.G., TARGETED NEUTERING ASSISTANCE PROGRAMS FOR SHELTERED PETS, THOSE LIVING IN LOW-INCOME HOUSEHOLDS, AND FERAL CATS)}}{\text{MONEY SPENT ON PROGRAMS FOR ANIMALS WHO HAVE BECOME HOMELESS (E.G., IMPOUNDMENT, SHELTERING, ADOPTION, \& EUTHANASIA-RELATED EXPENSES)}} = \text{PREVENTION QUOTIENT}$$

By comparing the PQ of communities that have made the greatest success in reducing shelter overpopulation to that of other communities, it will be possible to establish an optimal PQ to guide the allocation of resources between the two types of programs.

In early August of 2005, I spoke with a woman who ran a spay/neuter program in North Dakota as she prepared for meetings with the mayor and representatives of the local veterinary medical association. This was a milestone for me. Since the early 1990s, I had been helping people design and evaluate shelter overpopulation programs. I kept files state-by-state so I could refer those who contacted me to other people in their area they could work with. North Dakota was the last state in which I hadn't worked with anyone.

Some of the programs I worked on succeeded in reducing shelter intake and euthanasia rates. Others didn't. One thing remained constant, though: The most successful programs were designed using local shelter intake data and information from research studies. A Persian proverb says: "Unless moved by our heart, we are lame." I would add to that "Unless guided by our head, we are blind." Hard work doesn't guarantee success.

LESSON: The most successful shelter overpopulation programs use local shelter intake statistics and information from research studies to decide which programs to set up and which ones to prioritize.

Money doesn't either. Both can be wasted on programs that don't work well. To succeed, our passion to help homeless animals must be combined with level-headed analysis and planning.

GETTING TO ZERO:
THE COST-PER-LIFE-SAVED PRINCIPLE

We can use shelter data and research findings to decide which programs are necessary and which ones deserve the most emphasis.

An objective way to decide which programs deserve the greatest priority is to compare the reduction in shelter deaths from a program to its total cost. The life-saving effectiveness of preventive programs (for instance, targeted spay/neuter subsidy programs or subsidized dog training and owner education programs) can be calculated by dividing their total cost by any reduction in shelter intakes. The effectiveness of an adoption program can be calculated by dividing the cost of the program by the number of adopted animals. This way, the cost-per-life-saved of each program can be determined and the information used to decide which programs to start and which ones to prioritize.

By now we have a wealth of information that can be used to inform shelter overpopulation programs. Here are some examples:

- **PRE-RELEASE STERILIZATION PROGRAMS:** In the mid-1990s, some shelters began sterilizing all the cats and dogs they placed instead of taking a neutering deposit. Comparing intakes from periods in which these shelters placed intact animals after taking a neutering deposit with those after the shelters began sterilizing animals before placement shows

that pre-release sterilization programs drive down future intakes rates. After shelters in the six largest California counties with complete shelter statistics began sterilizing all adopted animals in 2000, intakes dropped by 10% over the next five years. In comparison, during the five years before the pre-release sterilization programs

> **LESSON:** Shelters that replace neutering deposit programs with those that sterilize all adopted cats and dogs before their release will drive down future intake rates.

began, when many shelters took neutering deposits, intakes at these shelters had grown by more than 8%. (A companion book to this one, *Replacing Myth With Math: Using Evidence-Based Programs to Eradicate Shelter Overpopulation* is available online at http://www.shelteroverpopulation.org. It contains the California shelter data in Figure 6 on Page 13.)

When a community puts together a shelter overpopulation plan, establishing pre-release sterilization programs in its shelters is a good place to start. Increasing the sterilization rate of adopted pets to 100% will not only reduce future intake rates, it will also increase the chance that the adoptions will be successful. Cats and dogs that have been sterilized are much less likely to be relinquished to a shelter than those that have been left intact. (For details, see Research Article #9 on Pages 126-127 of *Replacing Myth With Math*.) As a result, cats and dogs that have been placed intact are more likely to wind up back in a shelter. A pre-release sterilization program usually costs very little to begin with. And well-designed in-house programs often reduce the cost of sterilization to about the same as the neutering deposit the shelter used to take, keeping adoption affordable.

- **LOW-COST SPAY/NEUTER CLINICS:** Specialized high-volume spay/neuter clinics can help a community increase its pet sterilization rate by making it affordable for more caretakers to have their pets sterilized. Since the model high-volume clinic was established in Asheville, North Carolina in 1994, the euthanasia rate at the local shelter has dropped by more that 70%.

Specialized clinics are so productive that they can provide pet sterilization services at a much lower cost than a full service veterinary clinic, which has to have staff and equipment available to provide a much broader range of services. Like a pre-release sterilization program, setting up a high-volume spay/neuter clinic is a good place for a community to begin establishing shelter overpopulation programs. Although there are start-up costs, they can be recovered over time and the clinic can become self-supporting. Even better, it

> **LESSON:** Specialized spay/neuter clinics are so productive that they can provide pet sterilization services at a much more affordable cost than full-service veterinary clinics while still following the safest and best practices.

can follow the safest and best practices and still provide pet sterilization services at a lower cost than a full-service veterinary hospital. Clients who do not need financial help can be charged a bit more than the clinic's break-even cost and clinics can use the surplus for targeted subsidy programs that a community needs to help eliminate overpopulation in its shelters.

- **PUBLIC INFORMATION AND AWARENESS CAMPAIGNS:** *Of all the information that has been collected over the years about shelter overpopulation, none is more striking—or more important—than the finding of a 1992 study that less than 20% of all kittens and puppies were born to mothers who remained intact throughout their lives.* (See Research Article #12 on Pages 130-132 of *Replacing Myth With Math*.) The overwhelming rate at which female cats and dogs have litters before being sterilized continues to this day. (The number of pre-sterilization litters that were born to cats and dogs sterilized through a Tennessee spay/neuter program from June 2007 through May 2009 is shown in Figure 21 on Page 94 of *Replacing Myth With Math*).

More than four of five litters, then, come from cats and dogs that are sterilized after having had at least one litter. This is "low-hanging fruit." Caretakers of these animals don't need to be convinced to have their pets sterilized and, in most cases, don't need financial help to have it done.

Often they just need information. In a 2007 national survey, the most common reason people gave for not having had a female cat sterilized was because they believed that the cat would benefit from having a litter before being sterilized. (See Research Study #16 on Pages 135-136 of *Replacing Myth With Math*.) The opposite is true. Research has shown that being sterilized before first estrus will almost eliminate a dog's risk of getting mammary cancer and will reduce that risk for a cat by 90%.

During the past 30 years, public information and awareness programs about the benefits of pet sterilization have led to enormous increases in the pet sterilization rate. This has helped reduce the shelter euthanasia rate to one fifth of what it was in 1975. *These programs have had just one shortcoming, but it has been a devastating one. While most people now understand why their pet will be better off by having been sterilized, many do not know when is the best time to have it done.* In collaboration with local veterinarians, advocates can undertake a public information campaign that addresses this critical and common lack of information even if they do not have the resources to start a spay/neuter clinic or a neutering subsidy program.

- **PET STERILIZATION SUBSIDY PROGRAMS FOR CARETAKERS LIVING IN POV-ERTY**: We now know that what Barbara Carr found in New Hampshire is true in other parts of the country, too: Pets living in low-income households are much less likely to be

spayed or neutered than those residing in higher-income households. (Data from the 2007-2008 National Pet Owner's Survey sponsored by the American Pet Products Association are shown in Figure 5 on Page 12 of *Replacing Myth With Math*.) Another national survey found that cats living in low-income households were 9 times more likely to be intact than those living in middle-income households and 26 times more likely to be intact than those from upper-income households. (See Research Study #16 on Pages 135-136 of *Replacing Myth With Math*.)

The link between poverty and shelter intake rates can be broken, though, if the programs reach enough of the poorest caretakers and are sustained long enough. As discussed more fully in Chapter 6, the most effective programs provide subsidies only to those who really need them. Eligibility for Medicaid is the best way to decide who should receive help because people have to be indigent to receive Medicaid and it's not intrusive or a burden for them to show their Medicaid card to prove that they are eligible. The most effective programs achieve about 5 sterilizations each year of pets living in Medicaid households for every 1,000 people who live in the area served by the program. Even then, experience has shown that a program will not have done all it can to reduce shelter intakes until it has sustained this level of surgeries for five years or more. (See Figure 19 on Page 89 of *Replacing Myth With Math*, which shows intakes at New Hampshire shelters after a low-income pet sterilization subsidy program was established.)

Over the long term, it will cost more to adequately fund a low-income pet sterilization subsidy program than to operate a sterilization-at-adoption program or a high-volume spay/neuter clinic, about $500 a year for every 1,000 people who live in the area served by the program. Experience has shown, though, that a community cannot completely stop putting down shelter animals to make room for new admissions until it provides an adequately funded, affordable, and accessible pet sterilization subsidy program for indigent pet caretakers.

- FERAL CAT MANAGEMENT PROGRAMS: Eighteen years ago, one researcher spoke of information about homeless dogs and cats as a "statistical black hole." For the most part, that is still true about feral and free-roaming cat populations.

In the last several years, though, information has become available that can be used to design more effective feral cat management programs. A study of more than 100,000 feral cats trapped in seven large-scale Trap/Neuter/Return (T/N/R) programs found that very few of them had previously been sterilized. (See Research Article #11 on Pages 129-130 of *Replacing Myth With Math*.) Other studies have shown that a substantial percentage of cats living in feral colonies had migrated there from households. Given that most of these migrants were sexually intact, the timely sterilization of household cats is critical to prevent migration so that the size of feral populations can be

effectively managed. The relatively low sterilization rate of cats living in low-income households makes it clear that adequately funded low-income pet sterilization subsidy programs are critical to the effective management of feral populations.

Data can also be used to better inform shelter admission policies for feral cats. The large-scale study mentioned above also found that less than half of one percent of more than 100,000 cats sterilized through these T/N/R programs had to be euthanized for health reasons. These data contradict the commonly held belief that the lives of feral cats are "nasty, brutish, and short" and show that there is no humane justification for the wide-scale euthanization of feral cats.