



GETTING 2 ZERO

Conference Convenor

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Speaker profile and full conference paper

Animal Welfare League Australia

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Dr. Lila Miller received her veterinary degree from Cornell University. She has over 30 years of experience working in animal sheltering for the American Society for the Prevention of Cruelty to Animals (ASPCA) in New York City where she is Vice President of Veterinary Outreach. She taught the first course in shelter medicine at a veterinary college in the US, co-edited the only veterinary textbooks on shelter medicine and has extensive teaching experience in shelter medicine and animal cruelty. She cofounded the Association of Shelter Veterinarians and has received awards from the American Veterinary Medical Association and American Animal Hospital Association for animal welfare.



General considerations for TNR programs

Introduction

Animal shelters in the United States have done a fairly good job in recent years of increasing the live release rates of dogs, but cat welfare remains one of the biggest problems that face society and the animal welfare community. For decades, animal control and rehoming efforts have traditionally been focused on dogs, and in comparison, cats have been virtually ignored. As a result, unlike decreasing dog euthanasia numbers, cat euthanasia numbers have not decreased and many shelter medicine experts believe that in many cases, admitting a healthy cat into a shelter severely compromises that animal's health and well-being, and often results in increased animal suffering and death.

The management of cats consists of dealing with several different populations, i.e., ferals, stray, free-roaming and owned. Cats may pass between these categories at any given point in time.

- Free-roaming cats may be feral, indoor/outdoor owned cats, totally outdoor cats who may be owned or "community" cats without a specific owner. Owned cats who become lost, have no identification such as a microchip or collar, and are not reclaimed could be considered strays, and if they eventually become unsocialized they could be considered to be feral.
- Ferals may be defined as being untamed and un-socialized animals who are either born in the wild or are abandoned or returned to the wild. They are very fearful and distrustful of people, and life in a shelter is extremely distressing for them. Shelters that admit feral cats should house them in a separate area away from dogs, noise and foot traffic, and handle them as little as possible, as handling can be dangerous for staff and extremely frightening to the cats, who will make desperate attempts to hide or escape. Attempts to socialize or adopt them is discouraging. It often requires many months of patient care just to get the cats to accept the presence of a human in the same room without making attempts to escape.
- Stray cats are generally defined as homeless cats who often remain socialized and may be friendly towards people. Stray cats who remain in the wild long enough may become feral.
- Owned cats should be considered indoor only pets. Once they are permitted free access to outside, they can be considered free-roaming and if they become lost, they may be classified as strays.

While improving conditions for all cats, both privately owned and in shelters, is a priority concern, it is the management of free-roaming cats that raises the most controversy. It is believed that the number of feral cats may be equivalent to the number of owned pet cats, which in the United States would be somewhere between 82 and 88 million. Alternatively, an estimate of the number of feral animals may be obtained by dividing the community's human population by six. Dr. Julie Levy, director of Maddie's shelter medicine program at the University of Florida's College of Veterinary Medicine does an excellent job of describing the debate over the true impact of free-roaming cats on the environment and feline health in the second edition of the textbook, *Shelter Medicine for Veterinarians and Staff* (Miller and Zawistowski). She describes the debate as "ongoing, often emotional, and fueled largely by a lack of sound scientific data on which to form credible conclusions." Humane management of the cat population, which includes owned as well as unowned animals, can be difficult when trying to sort through the true science, animal welfare concerns, and public opinion as well as trying to determine the number of animals to be targeted by control efforts and their impact on the environment. The debate includes veterinarians; the animal welfare community; municipalities and public health officials dealing with animal control issues such as rabies and zoonotic diseases, nuisance complaints, the cost of care of the cats in animal shelters etc.; conservationists concerned about the impact of feral cats on indigenous wildlife, particularly birds, and so on. There are governmental as well as non governmental agencies involved in cat population management, which frequently pits animal welfare organizations against municipalities which do not have the same mandate.

Reasons for and methods of control

The need to control roaming cat populations is described in the document entitled "Humane Population Management Guidance" that was published by the International Companion Animal Management Coalition and can be downloaded from their website. The reasons include acting when the welfare of the cats is compromised; when the cats present a public health risk to humans (zoonotic diseases such as rabies, Toxoplasmosis, *Yersinia pestis* or plague, Bartonellosis or cat scratch fever, Salmonella, Pasteurella, roundworms, Cryptosporidium, Microsporum, etc.); environmental contamination with urine and feces; nuisance complaints about cats fighting and scavenging; concerns about cats spreading diseases to other cats; or predation on wildlife. Welfare can be compromised if there are high levels of disease; inadequate food supply; lack of appropriate shelter; high mortality rate due to automobile accidents, attacks by dogs, other predators and, unfortunately, even by humans. If none of the above conditions applies, then one of the courses of action may be to do nothing. However, if any of the above conditions apply, communities have taken several approaches to dealing with cat colonies, including:

- Biological control, hunting and poisoning,
 - ◊ A classic example is Marion Island, South Africa, where a population of 5 cats in 1949 grew to over 2500 by 1975. Panleukopenia, a deadly cat disease caused by a parvovirus, was introduced in 1977, which killed about 54% of the cats. By trapping, hunting, poisoning, and using dogs, by 1991, no cats were sighted on the island
- Trap the animals and take them to the animal shelter,
 - ◊ Since most of these cats are not adoptable, they usually end up being euthanized, which is a tremendous use of resources
- Trap the animals and place them in a sanctuary,
 - ◊ Sanctuaries are costly alternatives- they fill up quickly and become overcrowded, require the purchase of land, a building, staff, maintenance and insurance costs, etc.,
- Trap the animals and relocate them,
 - ◊ A safe location must be found and multiple cats must be moved, which is time consuming and stressful for the cats, who need time to adjust to new surroundings. A typical cat colony contains between 3 to 10 animals, maximum. This approach also has the potential to introduce new disease into an area
- Trap the animals and euthanize them
 - ◊ This strategy is often employed in response to complaints and may achieve temporary results, but it is difficult to trap all the cats, which is necessary to be truly effective at eliminating the colony. It is expensive, often doesn't work because of breeding and the fact that other cats will enter the area and start another colony, and is often objectionable to the public.
- Trap, neuter, vaccinate, and return them to where they were found.
 - ◊ This strategy prevents the birth of kittens, decreases fighting, allows for socialization and adoption of kittens which results in a decrease in colony size, and in some cases, leads to an attrition of the colony, which is often the ultimate goal. In cases where there is controlled feeding, there may also be less noise, less odor, less scavenging, and increased welfare.

One rationale for trap neuter return

The American Society for the Prevention of Cruelty to Animals (ASPCA) is a national animal welfare organization founded in 1866 whose mission is the prevention of cruelty to animals.

They had the contract for animal control in New York City for over 100 years, and the main strategy used for control of feral cats was to trap and euthanize them. Yet despite decades of this intensive activity, the feral cat population continued to flourish. The trap and kill only policy changed when it became clear that the public did not favor this solution and wanted a more humane alternative. Before trap neuter return became an alternative, people who asked for assistance trapping a cat for sterilization were told that euthanasia was the best solution because a life outdoors was a cruel one. The agency began to rethink its approach when people said they would continue to feed the cat and just let her breed. One telephone study conducted in 2007 revealed that given two options for dealing with feral cats, 81% chose to leave the cat on the street, while only 14% opted to trap and kill the cat. If told cats on the street would likely die in two years, 72% of the respondents chose to leave the cat on the street, while 21% chose immediate euthanasia. Other studies have shown that feeding community cats is a widespread activity, with approximately half of the feeders being non-pet owners. It was very clear that veterinarians and animal welfare proponents needed a method for dealing with free-roaming cats that did not involve euthanasia and trap neuter return was one potential answer.

Trap Neuter Return

Trap-neuter-return (TNR) was conceived as a grassroots, non lethal method to control community cat populations through sterilization. TNR programs are often run by volunteers who depend on donations to operate. They also utilize volunteer veterinarians and veterinary technicians to keep the costs low. High volume sterilization clinics are often conducted that result in the sterilization of over 100 animals in one day. Programs may be very simple and consist only of the vaccination, sterilization and release of the animals, while other programs include registration and active monitoring of the colony members, including feeding and identifying members who may need medical care. Healthy socialized kittens may also be removed by the colony caregiver and placed for adoption. Studies can be found where TNR programs resulted in a decrease in complaints about cats, decreased admission of cats in the shelter, decreased operating costs, increased staff morale, etc. TNR has been endorsed by the American Association of Feline Practitioners, Association of Shelter Veterinarians, ASPCA, Humane Society of the US, National Animal Control Association and many others.

But, like most control methods, TNR doesn't always work and there are cases where it failed to control or reduce the number of animals in the colony. It is believed that in order for a TNR program to be successful, at least 70% of the female cats must be sterilized. It may be difficult to achieve this percentage. In addition to other cats joining the colony, there are cases where the public dumps cats they no longer want into the colonies, which interferes with attrition of the colony. However Trap neuter return programs are most effective when they are well planned out and implemented in well-defined, geographically restricted areas. The goal of these programs is stabilization of the colony, with reduction in the size and in most cases, eventual eradication of the colony. It takes time and patience to see results. They should not be set up in areas where cats may impact endangered species, near municipal water supplies, areas where wildlife rabies is epizootic, near high-traffic areas where road accidents are a major concern or areas where there is significant opposition from the community. Furthermore these programs should be part of a broad-based cat population management program that also includes education of the public regarding responsible pet ownership.

General considerations

- The ideal TNR program should have a caretaker who ensures that the cats have food and shelter, are sterilized and receive veterinary care in case of injury or disease. If a new cat joins the colony, the caretaker should trap that cat and bring him or her in for sterilization. In recognition of the fact that there are many more feral cats than colonies or caretakers, newer approaches to TNR are deemed "feral freedom" programs where there may not be a colony caretaker if the cat appears healthy and seems capable of surviving on his or her own.
- All staff and volunteers who work with feral cats should get prophylactic rabies immunizations if rabies is endemic in the area, and receive training in safe and humane animal handling, trapping and transport
- Gloves should be worn at all times
- Proper equipment (humane wire traps, nets, etc.) in good working order should be provided
- Written protocols should be established that address medical handling of cats who may be pregnant, have retained testicles (cryptorchid), infected uterus (pyometra), illness (feline leukemia (FeLV) or feline immunodeficiency virus (FIV)) or injury. A policy should also be established that provides guidelines for euthanizing sick and injured animals

Tips for anesthesia and surgery

- It is up to the veterinary staff to determine the best anesthetic and surgical protocols to utilize. There are many different anesthetic drugs on the market; the best protocols result in rapid induction with a predictable duration and plane of analgesia and anesthesia, while also being inexpensive and safe. In many cases, especially when several surgeries are being performed, the procedures are performed with injectable anesthetics because they can be administered while the cat is in a trap. Drug protocols may differ from those commonly used in private practice and can be found in other veterinary textbooks, including both editions of Shelter Medicine for Veterinarians and Staff.
- Animals should be examined after they are tranquilized, and weighed for accurate drug dosing. This can be done without handling the cat by weighing the empty wire carrier and subtracting that weight from the combined weight of the carrier with the cat in it.
- The eyes should be lubricated with a plain ophthalmic ointment rather than an ointment containing an antibiotic, which could cause an anaphylactic reaction.
- A sterile surgical pack and technique should be used on every animal except cat neuters.
- Female cats may be spayed through a midline abdominal or flank incision. The advantage to the flank incision is that it can be monitored easily by the caretaker without handling the cat.
- Retained testicles should be removed because even though a cat with bilaterally retained testicles is usually infertile, the testicles may become twisted or cancerous and they can still produce testosterone, which contributes to aggression, urine odor, and territorial behavior.
- Although the routine use of perioperative antibiotics is generally not recommended for most routine surgeries, cats in TNR programs have a higher risk of wound infections because they are released back into the environment fairly quickly which may therefore justify the routine administration of long-acting antibiotics pre-operatively.
- Fluids should be available for subcutaneous administration to animals who may be lactating, pregnant, slightly debilitated, dehydrated, or have diarrhea or pyometras.
- The tip of the ear should be removed while the cat is under anesthesia in order to provide an easy method of identifying sterilized animals from a distance and without handling them. Although some find ear tipping objectionable, it is preferred over notching and ear tags. Many shelters recognize the ear tip and either do not pick these cats up or have arrangements with colony caretakers to return them to the colony.

- Cats should be placed in their traps after surgery and allowed to recover overnight in a warm quiet area before their release. While the optimal time to release the cats back to the colony is not known, quick release is often preferred as it reduces stress and allows the cat to regain his or her position in the colony's social structure.

FeLV and FIV testing

The American Association of Feline Practitioners recommends that all cats should be tested routinely for FeLV and FIV, but these testing recommendations that were developed for pet cats may not be appropriate for TNR programs. No healthy cat should be euthanized based on the results of a single positive test, yet in a TNR program, there may be only one opportunity for testing at the time of trapping and surgery. Epidemiological studies show that both viruses are present in about 4% of feral cats, which is the same as the infection rate for pet cats that go outside. Testing all of the cats in a TNR program is very costly considering the cost benefit ratio of identifying a very small number of positive cats. Because the prevalence of both viruses is fairly low in this population, up to 50% of positive test results in healthy cats could be false positives. For those reasons, many programs choose not to test and instead use the money to perform more sterilizations.

Vaccinations

It has been suggested that TNR programs should be renamed TNVR to reflect that vaccination should be a routine part of the protocol. Cats should be vaccinated with a modified live panleukopenia, herpes, and calici virus vaccine, and killed rabies vaccine. Routinely using rabies vaccines with a 3 year duration may help make the TNR program more acceptable to public health officials. Even though the animals may not be available for booster vaccinations, many of them will still benefit from one injection at the time of surgery.

Parasite control

While the value of a one-time deworming may be questionable, it should be undertaken whenever possible with a safe and inexpensive broad-spectrum product. This is particularly important for kittens who are usually more severely affected by parasites than adults. Because feral cats cannot be handled, the products must be applied either topically or by injection. Cats can be sprayed for fleas prior to surgical preparation. Animals should be checked for air mites as well and treatment provided.

Conclusion

Trap- neuter-vaccinate- return programs are just one tool to use to try to manage free-roaming cat populations. They are not the only answer, and are not appropriate in every situation. They represent a very small fraction of the programs in place in the United States to manage their numbers. Many communities adopt these programs as an alternative to lethal control and bringing the cats into shelters, which is expensive, extremely stressful for these non-adoptable cats and the staff trying to handle and care for them, and too often results in their suffering before euthanasia. The major objections to these programs are concerns about the impact of free roaming cat predation on indigenous wildlife and birds, and concerns about poor welfare of these animals. The conclusions reached regarding predation based on current data and studies remains controversial, and many might argue that even with a potentially shortened life span compared to that of pet cats, allowing healthy animals to live out their lives naturally is still the preferable, more humane solution.