

The Case for Accessible Spay/ Neuter in Canada



Canadian Federation of Humane Societies Fédération des sociétes canadiennes d'assistance aux animaux

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Almost a million cats and dogs are languishing in shelters in Canada, and countless more are surviving outdoors as feral or stray. But there is a solution...

Companion animal overpopulation is one of the most pressing animal welfare issues of our time. Overpopulation exists when there are too many animals relative to the number of potential homes in which they can be responsibly cared for. Kass (2007) defines overpopulation as "the existence of cats [and dogs] that are at risk of euthanasia because they are both unwanted and not owned. This definition includes the most obvious manifestation of overpopulation: the dynamic population of cats [and dogs] in animal shelters." In 2011 there were an estimated 800,000 cats and dogs languishing in shelters in Canada awaiting adoption or facing euthanasia (Canadian Federation of Humane Societies [CFHS], 2012). In addition, an unknown number of homeless stray and feral animals, particularly cats, are surviving outside of shelters. While the solution to overpopulation is multifaceted, stakeholders agree that reducing unwanted litters through accessible spay/neuter surgery is the most critical element.



It is widely agreed among animal care professionals that an increase in spay/neuter rates in cats and dogs is the key to long-term population control (ASPCA, 2013; Looney et al, 2008; Nova Scotia SPCA, n.d.; Ontario SPCA, 2009). First, unplanned litters from intact animals with homes and continual litters from unsterilized homeless animals contribute to the growing demographic of animals in shelters. Spaying and neutering controls fertility, leading to decreased birth rates and fewer unwanted animals; fewer unwanted animals results in lower intake at shelters and, ultimately, less euthanasia. Second, intact animals often exhibit undesirable behaviours to the extent that "being sexually intact has been identified as the leading risk factor for owner relinquishment of cats and dogs" (Association of Shelter Veterinarians [ASV], 2012).

WHAT IS ACCESSIBLE SPAY/NEUTER?

"Accessible" is simply defined as available to as many pet guardians as possible. Accessible spay/neuter programs remove existing barriers to the availability of sterilization. Such programs include those that offer subsidized spay/neuter surgery, those that are highquality/high-volume clinics, and those that are able to bring clinics closer to the animals or vice versa.

Sterilization through spay/neuter surgery (also known as "fixing" or "altering") is a straightforward, standard medical procedure performed by veterinarians to surgically alter the reproductive organs of an animal so they are unable to produce offspring. It is a permanent and effective solution to the companion animal overpopulation crisis. The Association of Shelter Veterinarians (ASV) supports juvenile spay/neuter of dogs and cats (performed at 6-16 weeks of age), saying it affords many advantages, including shorter surgical and recovery times (ASV, 2012). Similarly, the Canadian Veterinary Medical Association (CVMA) recommends spay/neuter of dogs and cats prior to sexual maturity (Canadian Veterinary Medical Association [CVMA], 2012).



DO YOU KNOW YOUR MULTIPLICATION TABLES?

CATS: In one year, a fertile cat can have up to three litters each with an average 4.3 kittens. Given that females from two of these three litters can become fertile within the 12-month period, a rate of 12.8% mortality prior to weaning, and a gender ratio of 47.5% females in the litter, just one unspayed female alone can result in 25 kittens born in one year.

DOGS: Similarly, a fertile dog can have up to two litters each with an average 5.5 puppies. Given that females from one of these litters can become fertile within the 12-month period, a rate of 12% mortality prior to weaning, and a gender ratio of 47% females in the litter, just one unspayed female can result in 21 puppies born in one year.

<u>References:</u> Slater, 2007; Kass, 2007; Schmidt, Chakraborty, & Wildt, 1983; Jemmett & Evans, 1977; Stafford, 2007; Linde Forsberg & Reynaud, 2012; Altman & Dittmer, 1962.

Accessible spay/neuter is the key to reducing shelter populations and euthanasia rates.

In late 2012 the Canadian Federation of Humane Societies (CFHS) released its groundbreaking study, *Cats in Canada: A Comprehensive Report on the Cat Overpopulation Crisis.* This report compiled data from a national market survey and a survey of 478 Canadian stakeholders. The stakeholders surveyed represent humane societies, SPCAs, municipalities, rescues, spay/neuter groups, feline Trap-Neuter-Return (TNR) groups, and veterinarians from across the country. When asked "In your opinion, what would be the best way to deal with the cat overpopulation problem in Canada?" these experts noted the importance of a multi-pronged approach that included spay/neuter, education, and regulatory tools. In particular, more than 70% of stakeholders who responded to the survey recommended spay/neuter surgeries – including affordable and accessible services – as the key to addressing the negative consequences of cat overpopulation (CFHS, 2012).

This recommendation is supported by the Association of Shelter Veterinarians' Spay-Neuter Task Force, which identified spay/neuter programs as the best solution to overpopulation:

At this time, [accessible spay/neuter] programs are the best antidote to mass euthanasia of cats and dogs resulting from overpopulation. Furthermore, they represent the most financially responsible and humane way for communities to increase the numbers of cats and dogs that are neutered. By engaging in this new and rapidly developing practice area, veterinarians can play vital roles in alleviating overpopulation and decreasing untimely euthanasia of cats and dogs. (Looney et. al, 2008)



Similarly, the American Society for the Prevention of Cruelty to Animals (ASPCA) Position Statement on Mandatory Spay/Neuter Laws affirms, "the only method of population control that has demonstrated long-term efficacy in significantly reducing the number of animals entering animal shelters is the voluntary sterilization of owned pets" (2013).

A number of veterinary and humane organizations in Canada have official positions on spay/ neuter. Nova Scotia SPCA's White Paper on the Intake of Cats and Kittens states, "Spay and neuter is the only non-lethal, long term solution available to address stray and feral populations. It is also the only way to ensure that owned animals do not produce unexpected litters that may end up on the streets or in shelters" (2010). Its position statement on sterilization is:

Nova Scotia SPCA believes that the most effective way to decrease the proliferation of unwanted dogs and cats is for all owners of companion animals to have them spayed or neutered. Each year, a staggering number of animals in Nova Scotia become homeless. The consequences are tragic. Tens of thousands of dogs and cats end up on the street or in shelters. Many more become neglected

"the only method of population control that has demonstrated long-term efficacy in significantly reducing the number of animals entering animal shelters is the voluntary sterilization of owned pets"

and abused. Spaying and neutering pets will reduce shelter intake and euthanasia. Spaying and neutering are safe and routine procedures and can significantly reduce health risks, physical stress and improve behaviour. Altered pets are also less likely to roam, thus reducing the risk of injury, accident and loss. (n.d.)

Likewise, British Columbia SPCA's position statement on Cat Welfare indicates, "Guardians are expected to contribute to the reduction of cat overpopulation through early spay/neuter" (2010). BC SPCA also has a position statement supporting juvenile sterilization of dogs and cats in the care of an animal shelter that states, "Performing pre-pubertal procedures allows animal welfare organisations to prevent excess litters by ensuring animals are neutered before adoption, thereby combating further overpopulation and reducing the need to euthanize unwanted animals" (2009).

The position statement of the Canadian Veterinary Medical Association states:

The CVMA believes that neutering is an important aspect of responsible pet care both because it helps to combat dog and cat overpopulation, and because of the health and behavioural benefits to the animals. The CVMA strongly recommends that all cats and dogs which are not part of a responsible breeding program be neutered before sexual maturity, except where there are valid health or behavioural benefits for delaying the procedure. (2012)

Finally, in its position statement on spay/neuter, the CFHS "strongly urges the spaying/ neutering of all dogs and cats not part of a responsible breeding program," and "supports early (prepubertal) spay/neuter of cats and dogs" (2005). The background to this statement elaborates:

Spay (female) and neuter (male) of dogs and cats is one of the most important aspects of reducing pet overpopulation by preventing the birth of unwanted offspring. It also carries behavioural and health benefits for dogs and cats, including the reduction of sexual behaviours (marking, aggression, roaming, etc.) as well as a reduction in the risk of some diseases (cancers, prostatic diseases). Spaying or neutering pets is an essential component of responsible pet ownership. (2005)

What is the state of spay/neuter in Canada?

Information collected through the CFHS multi-stakeholder survey and national market survey of Canadians helps paint the picture of companion animal demographics in Canada and what is needed to increase accessibility of spay/neuter services. Respondents to the multi-stakeholder survey comprised veterinarians (51%), humane societies and SPCAs (21%), municipalities (13%), as well as rescue, TNR, spay/neuter, and other groups (15%).

- In 2011 there were 10.2 million cats and 5.5 million dogs in households. Of these, 20% of cats were not sterilized, indicating there are 2 million intact cats in homes in Canada (CFHS, 2012). Because the survey was conducted in the context of the Cats in Canada report, the question was not posed for dogs.
- Respondents to the multi-stakeholder survey reported 150,000 cats and 70,000 dogs were admitted to their shelters in 2011. Given that the responding stakeholders represent only a small portion of possible shelters in Canada, figures were extrapolated to obtain a conservative estimate of over 600,000 cats and 200,000 dogs languishing in shelters across Canada in 2011 (CFHS, 2012).
- Only 18% of cats and 28% of dogs surrendered by their owners in 2011 to shelters responding to the survey were already spayed or neutered (CFHS, 2012). This low proportion of sterilized animals can put enormous pressure on the shelter to spay or neuter before the animal is adopted out. (Note that spay/neuter status at intake was recorded by less than half of the respondents to the survey.)
- In 2011 more than 72,000 cats and 30,000 dogs were adopted from shelters. The vast majority (93% to 97%) of humane societies, SPCAs, Rescues, and TNR groups that responded to the survey spay or neuter animals before releasing them for adoption. Only 27% of municipalities spay or neuter before releasing animals. About 85% of veterinarians who adopt animals out of their clinics spay or neuter the animals before adoption (CFHS, 2012).

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"Spay and neuter is the only non-lethal, long term solution available to address stray and feral populations. It is also the only way to ensure that owned animals do not produce unexpected litters that may end up on the streets or in shelters"

- Two of the top reasons given by shelter respondents as to why animals might not have been spayed or neutered before release from a shelter are lack of funds for surgeries and lack of access to veterinary services. Other reasons are the animal was too young or too old to be spayed or neutered and surgery was medically not recommended. Similarly, when veterinarians who offer cats and dogs for adoption at their clinics were asked why animals might not have been spayed or neutered before release, lack of funds for surgery was the second-ranked reason (the top reason being the animal was too young or too old to be spayed or neutered; Nanos Research, 2012).
- In 2011 60,000 cats and 10,000 dogs were euthanized in the shelters that responded to the survey. These animals represent 40% and 14% of the total number of cats and dogs, respectively, admitted in 2011. The top reason given by shelters, rescues, and TNRs for euthanasia was illness or change in status (where a healthy animal becomes ill while in shelter care) for 88% of feline euthanasia cases and 79% of canine cases). Animals may enter a shelter in a healthy state but become ill over time due to stress and/or crowded conditions. Lack of space was given as the reason for 29% of the feline euthanasia cases and 9% of the canine cases (CFHS, 2012).
- While the number of homeless animals who are not in shelters is extremely difficult to quantify and is an important data deficiency, the scale of the issue can be contemplated. Local rescue organizations estimate the number of homeless cats living in the streets of Toronto at between 100,000 and 500,000 (Animal Alliance of Canada, 2013; Ontario SPCA, 2009). The population of abandoned and stray cats in the Halifax Regional Municipality is estimated at 40,000 to 100,000 (Spay Day HRM, n.d.).
- Examining where Canadians obtain their companion animals may also reveal part of the overpopulation picture. Canadians are more likely to acquire cats as strays, from friends and relatives, as giveaways, or from their companion animal's offspring (collectively 52%) than from a humane society, SPCA, or shelter (25%); or from a pet store or breeder (19%; CFHS, 2012). Canadians source 45% of dogs from a pet store or breeder; 35% from strays, friends and relatives, giveaways, or their companion animal's offspring; and 13% from a humane society, SPCA, or shelter (Ipsos Reid, 2008). This suggests that unplanned litters are contributing to the population of homed companion animals, resulting in a lower rate of adoption of already homeless animals in shelters.

Cat and dog overpopulation results in significant costs to our communities. Accessible spay/neuter programs are effective in reducing these costs.

There are many costs to communities from the crisis of overpopulation of cats and dogs. Direct costs include:

- spending by private and public shelters and individuals caring for and euthanizing homeless animals;
- costs to police and animal control and impounding services responding to complaints regarding stray animal incidents (for example, dog bites), nuisances (including roaming and fighting) and death of livestock; and
- spending to address the potential increased incidence of transmissible diseases, such as rabies.

Other equally significant costs of overpopulation that are more difficult to value include the injury and death to wildlife from stray animals, the anguish caused to empathetic humans by the suffering and death of homeless animals in shelters, and of course, the direct suffering and death of the homeless animals themselves.

A number of Canadian and American communities have made the decision to implement accessible spay/neuter programs and are experiencing positive outcomes in reduction of shelter intake and euthanasia levels.

In 2008 the Regina Humane Society (RHS) partnered with the City of Regina and began offering fully- and partially-subsidized spay/ neuter services targeted to low-income clients. RHS and the City of Regina later expanded the program to include subsidized sterilization services to rescue organizations. The executive director of the Regina Humane Society reports that since 2008, there has been a downward trend in the number of incoming animals to its shelter, which also serves as the municipal impound facility. In 2012 17% fewer animals were admitted compared to 2008, despite a fast-growing Regina population. The shelter's euthanasia rate decreased by 25% during the same time period. Adoption rates have increased year over year and the RHS is experiencing its highest rate of live animal release to date (L. Koch, personal communication, June 6, 2013).

In Calgary, the city currently offers fully-subsidized spay/neuter services for low-income households, while the Meow Foundation provides a subsidized program using vouchers and also operates a Trap-Neuter-Release (TNR) program. The executive director of Calgary Humane Society (CHS) notes that in the last three years, the CHS has experienced a 9% decrease each year in the number of cats admitted to the shelter, a result attributed directly to accessible spay/ neuter initiatives in the community (M. Takhar, personal communication, April 9, 2013).

In addition to their adoption centres, Ontario SPCA currently operates three spay/neuter clinics available for use by the public, shelters, and rescue groups, regardless of geography or income. The first of these clinics opened in Newmarket in 2009. The director of Animal Welfare and

> Operations at the Ontario SPCA reports that between 2010 and 2012, the Newmarket adoption centre witnessed a 12% decline in cat intake, and the Orangeville adoption centre nearby experienced a 24% decline in intake. Furthermore, there was an 18% reduction in cat intake reported across the province. Adoption centres closest to the spay/neuter clinics experienced a higher than average reduction in cat intake. It was also noted the majority of spay/neuter clients come from outside the cities where the clinics are located, many driving from one to four hours to access the services, suggesting a link between the overall province-wide reduction and the establishment of these clinics (T. Firmage, personal communication, May 28, 2013).

Similar positive results have been observed in the United States. Within two years of implementing a spay/neuter program targeted to low-income clients in 2002, the city of Jacksonville, Florida, experienced an 8% decrease of animal admissions at shelters - the first decrease recorded. And after three years, a 37% decrease in euthanasia rate was observed. Prior to this program, the trend in local shelter admissions in Jacksonville was an annual increase of 15 to 20% (ASPCA, n.d. a). The success of this initiative led the non-profit organization that was created to administer the program, First Coast No More Homeless Pets, to undertake several other spay/neuter initiatives in the area.

Some communities are tracking their cost savings from implementing accessible spay/neuter programs. New Jersey and New Hampshire have implemented state-wide programs as a way of reducing the costs paid by municipalities and not-for-profit humane organizations for retrieving, impounding, and euthanizing stray animals. The New Hampshire subsidized spay/ neuter program that was established in legislation is a well-known success story. Between 1994, when the program was implemented, and 2000, a 34% decrease in shelter intake and a 75% decrease in euthanasia were documented (Secovich, 2003). The estimated savings in impound and sheltering costs was USD\$3.23 million, while the cost of implementing the spay/neuter program was USD\$1 million. In other words, there was a saving of \$3.23 for every \$1.00 spent

on the subsidized sterilization program. During the six years after the program was implemented, New Hampshire's eight largest shelters (which account for 95% of the animals admitted across the state) took in 30,985 fewer cats and dogs compared with the six years preceding the program (ASPCA, n.d. a). "Depending on the cost of services in their area," the ASPCA website for professionals indicates, "public agencies (and taxpayers) might save half to two thirds of their current animal-control costs after funding a spay/ neuter program" (n.d. b).

Thirty-four American states plus the District of Columbia have implemented a publicly-funded mechanism to subsidize the cost of spay/neuter (The Humane Society of the United States, 2013).

"The CVMA strongly recommends that all cats and dogs which are not part of a responsible breeding program be neutered before sexual maturity, except where there are valid health or behavioural benefits for delaying the procedure."

A number of these states are so convinced animal control and impound expenditures can be mitigated through implementing accessible spay/neuter programs that they have proclaimed laws to mandate ongoing state-funding, and these laws expressly mention the societal benefits. For example, Maine regulation states:

The purpose of the low-income spay/neuter program is to reduce:

- a) Stray and unwanted cats and dogs
- b) Cat and dog euthanasia rates
- c) Dog bites
- d) Feral cats
- e) Threats to public health and safety from rabies and other zoonotic diseases
- f) Community and state animal control costs

(Animal Welfare Rules, Section IX – Rules For the Low Income Spay/Neuter Program, 2009)

In summary, the above examples as well as others in the literature (White, Jefferson, and Levy, 2010; Frank and Carlisle-Frank, 2007; Hughes, Slater, and Haller, 2002;) show that accessible spay/neuter programs are cost-effective and well-recognized to provide the following positive outcomes:

- a decrease in companion animal overpopulation;
- decreased levels of euthanasia;
- fewer animals admitted to shelters;
- fewer stray and feral animals;
- fewer animal complaints;
- decreased risk of animal to human transmission of communicable diseases;
- an increase in total community spay/neuter levels; and
- more adoptions.

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While the evidence is clear that accessible spay/neuter programs are effective in reducing the costs to society of companion animal overpopulation, many communities in Canada still do not have such programs. Only 42% of respondents to the 2011 national multi-stakeholder survey indicated there was a subsidized spay/neuter option in their community (CFHS, 2012).



BENEFITS OF SPAY/NEUTER

Health Benefits to Animal

MALES: prevention of testicular cancer and prostate disease FEMALES: prevention of mammary cancer and uterine infections

Behavioural Benefits

MALES: reduced roaming, aggression, urine spraying, and territorial marking FEMALES: reduced aggression, howling, and house soiling

Cost Savings

Reduced animal control spending related to complaints, picking up, impounding, sheltering, and euthanizing stray animals; reduced spending by private and public shelters and individuals caring for and euthanizing homeless animals; reduced death of livestock.

Public Health and Safety Benefits

Reduced incidence of dog bites and nuisances (roaming and fighting); decreased transfer of rabies and other zoonotic disease (e.g., toxoplasmosis, ringworm, parasites) from animals at large.

Additional Benefits to Society

Alleviating injury and death to wildlife; less anguish caused to empathetic humans by the suffering and death of homeless animals; decrease in the direct suffering and death of the animals themselves.

What are the barriers to spay/neuter?

Cost is often cited as the primary reason individuals choose not to spay/neuter their companion animals (ASPCA, 2013; Ipsos Marketing, 2011, PetSmart Charities & Ipsos Marketing, 2009). Other reasons include lack of clear and accurate information (such as the age at which to have a cat or dog sterilized), and inconvenience of the location of spay/neuter facilities along with related transportation issues. In order to better understand specific barriers to spay/ neuter that may exist across Canada, the open-ended responses to the CFHS multi-stakeholder survey question "In



your opinion what would be the best way to deal with the cat overpopulation problem in Canada?" were reviewed (Nanos Research, 2012). References to addressing issues related to cost, access or transportation, knowledge or public attitudes, and the veterinary community were enumerated by province. In addition, responses that cited a role for government, for example by mandating spay/neuter through by-laws or providing subsidies, were also counted. The results are presented in Table 1.

Information was also gathered through a review of the websites of relevant government and non-governmental organizations, through interviews or short surveys of at least one key stakeholder in each province, and through interviews with representatives of provincial veterinary medical associations. In all provinces cost was identified by interviewees as a primary



barrier to spay/neuter. Related to cost are lack of competitive pricing and lack of fee advertising, which veterinary associations often do not allow. Accessibility to veterinarians for spay/neuter services overall or with regard to remote areas was also identified as a barrier. There is a need for more support from the veterinary community for accessible spay/neuter in general and for low-income clients in particular. In a number of provinces, veterinary regulations that impose requirements that are onerous for dedicated spay/ neuter clinics (stationary or mobile) were identified as a significant challenge. Finally, interviewees mentioned public perceptions or attitudes as well as lack of knowledge about spay/neuter as key obstacles.

TABLE 1

Spay/neuter solutions and barriers by province

spaymenter solutions and barriers by province											
	British Columbia	Alberta	Saskatchewan	Manitoba	Ontario	Quebec	New Brunswick	Nova Scotia	Prince Edward Island	Newfoundland	CANADA
Survey respondents whose communities have subsidized spay/neuter ^{a,b}	56%	49%	41%	46%	43%	7%	60%	50%	100%	33%	42%
Survey respondents who referred to the need to address spay/ neuter cost issues to solve cat overpopulation ^b	56%	32%	27%	31%	45%	28%	54%	43%	43%	42%	39%
Survey respondents who referred to the need to address spay/neuter access or transportation issues to solve cat overpopulation ^b	10%	3%	2%	8%	16%	1%	8%	5%	0%	0%	7%
Survey respondents who referred to the need to address spay/neuter knowledge or public attitude issues to solve cat overpopulation ^b	41%	35%	41%	21%	33%	31%	42%	30%	64%	27%	34%
Survey respondents who referred to the need to address issues with the veterinary community to solve cat overpopulation ^b	4%	2%	5%	3%	12%	6%	8%	9%	7%	0%	6%
Survey respondents who referred to a greater role for governments in addressing cat overpopulation ^b	46%	33%	17%	23%	31%	40%	25%	32%	21%	23%	32%
How veterinary association policies or regulations affect spay/neuter (Limit/Allow/Promote)	Limit	Allow	Limit	Limit	Limit	Limit	Allow	Limit	Allow	Allow	Promote ^c

- a CFHS, 2012
- b Nanos Research, 2012
- ^c Rather than an average of provincial results, the entry for Canada reflects the Canadian Veterinary Medical Association's position statement promoting spay/neuter (CVMA, 2012).



What are the solutions that remove these barriers?

Given the primary barriers to spay/neuter, key aspects of effective accessible spay/neuter programs are reducing the cost of surgery to the client, bringing facilities and potential clients closer together, and providing knowledge about spay/neuter. These aspects may be combined in a given program.

Options for accessible spay/neuter programs

Subsidized spay/neuter services

This approach involves the provision of services at a discounted rate through subsidies from charitable organizations, municipalities, and humane societies and SPCAs. Volunteer veterinarians, technicians, and other staff may donate their time and revenue. Existing programs are generally targeted to low-income clients who could not otherwise afford the cost of surgery. Often confirmation that a client is in a low-income group (for example, proof of government assistance or income tax form) is required. In one common approach potential clients are given or sold a voucher redeemable for a sterilization surgery at participating veterinary clinics. This approach is not typically as low in cost to implement as high-volume services and has been associated with failures where limited numbers of vouchers are distributed and many are not redeemed. Another criticism, where vouchers are distributed more broadly and without an associated client name, is that vouchers may be used by those not in the low-income bracket the program targets. SpayAid PEI, a volunteer-based not-for-profit organization providing financial assistance to low-income clients on Prince Edward Island, has

addressed some of the shortcomings in its voucher program: the sealed voucher has both the client's name and the animal's name on it and the client must book an appointment time with a participating veterinary clinic within three months of receiving the voucher. There is also a penalty for missed appointments (SpayAid PEI, n.d.; J. Thomas, personal communication, August 8, 2013).

Addressing the economically disadvantaged segment of the population may be critical in some communities. In his book, *Getting to Zero: A Roadmap to Ending Animal Shelter Overpopulation in the United States*, Peter Marsh describes how the introduction of an accessible spay/neuter program targeted to low-income clients in New Hampshire resulted in 30% decrease in euthanasia across the state, after nearly a decade with no change in shelter intake and euthanasia rates (2012).

While a clear gap is addressed by providing subsidized spay/neuter services to the most economically disadvantaged whose companion animals almost surely



would not be sterilized otherwise, there are also many less disadvantaged people who choose not to sterilize their animals due to cost issues. Restricting the clientele of subsidized clinics may also limit the sustainability of the program. As a result, some organizations do not impose a strict rule about who can benefit from low-cost spay/neuter. For example, Toronto Animal Services offers a subsidized spay/neuter clinic available to all residents of Toronto. Broad provision of subsidized spay/neuter services would accomplish the goal of increased sterilization rates, thereby reducing overpopulation and its costs to society.

High-quality/high-volume spay/neuter clinics

These clinics specialize in spay/neuter surgeries exclusively and, as a result, are streamlined and efficient in delivering the service to a larger number of clients. High-quality/highvolume clinics are able to offer a reduced rate for spay/neuter surgeries as a result of these efficiencies. One option is to set up a program within a general practice clinic to perform only sterilization surgeries on specific days of the week or month.

The Nova Scotia SPCA entered into a collaborative partnership with veterinarians to provide highquality/high-volume spay/neuter surgeries in the veterinary clinic of the Provincial Animal Shelter in Halifax, accommodating animals not only from within their own network of shelters, but also from local rescue groups, Trap-Neuter-Return (TNR) groups, and low-income clients. Three surgery days per week are dedicated to high-quality/high-volume sterilizations. The director of animal care at the Nova Scotia SPCA (NS SPCA) described the organization's experience, reporting that dedicating the time exclusively to spay/neuter allows for shortened surgery times and procedure efficiencies without compromising quality of care. Additional costs



are saved because shelter staff, rather than the veterinarian, handle client education and postsurgical care functions. On average, 30-50 surgeries are performed per month for low-income clients and rescue groups; another 140-160 surgeries per month are reserved for SPCA animals (Williams, 2012; S. Flemming, personal communication, August 14, 2013).

Mobile spay/neuter services and transport programs

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Mobile clinics bring spay/neuter services directly into the community instead of requiring community members to find their way to the clinic at their own cost. This approach includes both traveling surgical vehicles and "MASH" style programs, in which temporary clinics are set up in borrowed facilities at a location convenient for the target community, such as a school gymnasium. Transport programs pick up animals in a community, transfer them to a fixed clinic location, and return them after surgery. These services reduce barriers of transportation and geographic location and may be geared towards animals of low-income, transient, and rural clients, in addition to stray and feral animals.



The Alberta Spay Neuter Task Force provides high-quality/high-volume spay/neuter clinics and education for First Nations communities in Alberta. This registered charity targets communities with cat and dog overpopulation issues and aims to sterilize 70% of the breeding-age animals in an area in order to interrupt a breeding cycle and stabilize the dog population. The volunteer-based group sets up temporary MASH-type clinics and can perform up to 370 spay/neuter surgeries over the course of one weekend, in addition to providing other veterinary services, such as vaccinations, identification, and parasite control. The group hopes to assist these communities by reducing dog packs that can pose a threat to community members, reducing dog bites, and improving the health and well-being of companion animals living in the community (Alberta Spay Neuter Taskforce, 2012; N. Larsen, personal communication, August 8, 2013).

Policies and standards exist in several provinces that may be relevant to establishing mobile services. Veterinary associations accredit or approve clinics, and mobile and MASH-style clinics may not able to meet the standards required. For example, veterinary medical association policy may require practicing veterinarians or clinics to be associated with a "brick and mortar" structure.

Where organized transportation or mobile services do not exist, deeply dedicated volunteers donate their time and resources to transport animals for surgical services. One such volunteer is Linda Felix of Spay Day HRM, a not-for-profit organization that supports feline spay/neuter in Halifax. Ms. Felix makes all efforts to assist people overcome challenges to accessing spay/neuter services. Because many of these people do not have a vehicle, cat carrier, or telephone, and may sometimes be illiterate, she arranges the clinic appointment, provides the cat carrier, and transports the cat to the appointment. Afterwards she brings the cat home where she discusses post-surgical care and responsible pet ownership. Education and community relationships are built to gain the trust of residents in low-income neighbourhoods, thereby encouraging others to have their cats sterilized (L. Felix, personal communication, August 7, 2013).

Education about the benefits and importance of sterilization

Given that Canadians are less likely to acquire dogs and cats from humane societies, SPCAs, and other shelters (CFHS, 2012; Ipsos Reid, 2008) and may obtain their animals from individuals who are less informed about pet overpopulation issues, it is likely many Canadians are not receiving information about the importance of sterilization at the time of acquiring their companion animal. Therefore, public education to raise awareness about this issue is critical.

Education about the importance of companion animal sterilization is often a key component of accessible spay/neuter programs. Education efforts can range from one-on-one conversations with clients in a clinic or shelter environment to door-to-door community engagement to mass media campaigns, including social media.

Regina Humane Society's Animal Well Fair is an annual free event in central Regina that takes education for responsible pet ownership to a new level. The advertisement for the event says:

Try your hand at the Scoop the Poop Relay or Kitty Litter Dig to test just how quickly you can clean up after your pet. Why not make your favourite furry friend a toy, or test your knowledge about animal care at our trivia station? This jam-packed afternoon of free fun is a great chance for families in the North Central community to take home free pet food, collars, leashes and lots of other pet care items or qualify for subsidized spay/neuter services for Fido or Fluffy. Most importantly event attendees will learn about pet care in a way that is entertaining, educational, and engaging. Join the Society for a fun and educational afternoon that is all about our four-legged friends! Learn about pet care and animal welfare, and join in the celebration! (The Regina Humane Society, 2010)

Providing freebies to draw in participants and engaging the community in fun educational group activities builds friendship and trust and makes lasting impressions.

Legislation and incentives promoting spay/neuter

A variety of different types of incentives can be included in legislation. Many communities have requirements to register and obtain licenses or permits for companion animals. Differential licensing fees that are priced on the basis of whether the animal is sterilized or not is a mechanism used by a number of Canadian municipalities to incent or reward law-abiding citizens who are registering their companion animals for spaying or neutering them. Some communities require sterilization of animals that are made available for adoption or sold. A requirement for citizens to sterilize their companion animals can be included directly in the legislation, making sterilization a legal obligation. The borough of Verdun in Montreal even goes so far as to require guardians to provide proof of sterilization when they reclaim their stray animals who have been impounded at animal control facilities. Failing this, the animal may be sent directly to the veterinary clinic for sterilization (Règlement sur les animaux RCA11 210001, 2011).

The issue of whether to require spay/neuter as a license requirement is controversial as the cost of sterilization surgery may dissuade compliance with licensing (ASPCA, 2013; American Veterinary Medical Association, 2009). One way around this potential deterrent would be for a community to require animals be spayed or neutered but allow those who choose not to the option to purchase a permit for a fee that makes compliance with sterilization attractive. The City of Winnipeg has done just that. The Pound by-law (no. 2443/79) prohibits the owning of a cat over six months of age that has not been sterilized by a licensed veterinarian (2009). The owner of such a cat is required to obtain a valid permit, the fee for which is CDN\$55 in 2014 (City of Winnipeg, 2014). It is worth noting that Winnipeg has moved away from the permit and, as of January 2015, will require licensing with differential fees for sterilized versus unsterilized cats, similar to its approach for dogs (Responsible Pet Ownership by-law, no. 92/2013).

The executive director of the Regina Humane Society (RHS), which had tried and subsequently abandoned the permitting approach, cautions that mandatory spay/neuter laws are practically unenforceable, and without the accompanying accessible spay/neuter programming, the majority of the population will be out of compliance. Her view is that such legislation is short-sighted if it is not accompanied with adequate accessible spay/neuter programming nor supported with appropriate infrastructure, funding, and enforcement (L. Koch, personal communication, June 6, 2013).

In this regard, ASPCA's Position Statement on Mandatory Spay/Neuter laws states:

The ASPCA does not support mandatory spay/neuter laws, however, based on currently available scientific information, the ASPCA strongly supports spay/ neuter as an effective means to reduce companion animal overpopulation.... The most important step a humane community can take to decrease companion animal overpopulation is to make a safe, effective, voluntary spay/neuter program available and readily accessible to the community, and create programs and incentives targeted to the populations known to be contributing disproportionately to shelter intake and euthanasia. (2013)

In its position statement on spay/neuter, the CFHS "recommends that all pet licensing authorities establish substantially higher rates for licensing of unsterilized versus sterilized dogs and cats" (2005). The background to the position explains that "providing a licensing rate differential has been proven to increase the number of spayed/neutered dogs and cats, thereby reducing the number of unwanted and abandoned pets, as well as the costs for municipal enforcement and animal control."



A note about accessible spay/neuter for Trap-Neuter-Return (TNR) groups

One consequence of companion animal overpopulation is the presence of feral and stray animals. If these animals are not sterilized, their continual breeding also contributes to increase of the homeless population. Many dedicated people volunteer their time and resources to care for feral and stray animals providing food, shelter, and veterinary attention. Volunteer caregivers look after managed feral cat colonies, which are made up of lost or abandoned and stray cats as well as their offspring. TNR groups such as Ca-R-MA (Cat Rescue Maritimes) humanely capture feral cats from colonies, have them sterilized, and return them to the colony to live out their lives. These efforts allow the colony population to be stabilized and eventually reduced. Spay/neuter services for these initiatives may be donated by individual sympathetic veterinarians or by organized programs such as those mentioned above. The very existence of TNR initiatives depends on the availability of accessible spay/neuter services, and in communities where there are no such services volunteer caregivers have to transport animals for hours to access affordable veterinary care.

The cost of reducing homeless cat and dog overpopulation is currently being borne by charitable organizations, animal welfare agencies, and veterinarians. Public sector support can ease this burden and redistribute the costs to those who

While the reduction in the population of homeless cats and dogs has benefits to society as a whole, the "burden" of current approaches is predominantly being borne by animal welfare agencies and veterinarians. Animal welfare organizations spend resources caring for and sterilizing animals as part of the adoption process. This includes owner-surrendered animals, most of whom are not spayed or neutered (only 18% of cats and 28% of dogs surrendered to shelters by their owners in 2011 were already sterilized (CFHS, 2012)).

The annual value of cat spays and neuters alone being conducted by non-profit organizations with supporting veterinarians is almost CDN\$8 million, based on an average cost of \$200 for

a cat sterilization surgery (CFHS, 2012). As noted above, the vast majority of rescue organizations, humane societies, and SPCAs who responded to the 2012 CFHS survey spay and neuter before animals releasing them from shelters, compared to only 27% of responding municipalities (CFHS, 2012). In addition, 85% of veterinarians surveyed who offer animals for adoption at their own clinics sterilize these animals (CFHS, 2012). Veterinarians across the

are receiving the benefits.



country are supporting shelters, rescues, and feline Trap-Neuter-Return (TNR) groups through provision of spay/neuter surgeries and provide an average discount of 42% to shelters and rescue organizations (CFHS, 2012). However, the chair of the CVMA Business Management Committee affirms that because private practitioners run small businesses with high overhead costs and low profit margins, it is a challenge for them to provide veterinary services without compensation (Dr. R. Bellamy, personal communication, August 14, 2013).

The discrepancy between who pays and who benefits as well as related perceptions is creating tension between private veterinary practitioners and animal welfare organizations that offer veterinary services (Burns, 2012). This is the case particularly where private practitioners feel there is competition with welfare organizations for the same clients. For example, there may be resistance from local veterinarians to community low-cost spay/neuter programs due to a perception that the public will substitute low-cost services for regular veterinary services. Frank and Carlisle-Frank studied five community programs implemented in large counties of American states where low cost spay/neuter programs were put in place and found no such substitution effect (2007). Rather they observed an increase in the overall spay/neuter levels in these communities. There seemed to be a complementary effect where the availability of discount

programs also promoted non-subsidized spay/neuter procedures. Similar experience is reported by Humane Alliance, which runs a high-quality/high-volume spay/neuter clinic, as well as transportation services in western North Carolina, and trains other organizations (including the Ontario SPCA) on best practices based on its model. Through these programs Humane Alliance performs 23,000 sterilizations a year (Humane Alliance, 2012) and reports that 86% of their clients have no previous relationship with a veterinarian (Humane Alliance, 2010). Thus accessible spay/neuter services do not draw existing clients away from private practice veterinarians, and may even

"Our practice is successful, grossing seven figures. Our doctors and staff are paid well above the nationwide average for our positions. It's simply not true that low-cost spay/neuter programs can't be a productive component of both practice success and the fight against pet overpopulation" provide veterinarians who support accessible spay/neuter initiatives with a potential new set of clients with whom they may establish a relationship for ongoing veterinary care after sterilization.

Supporting veterinarians who offer accessible spay/neuter services by providing them with tax exemptions or by allowing them to receive charitable contributions is one way to alleviate tensions while achieving societal benefits (Burns, 2012). Relations between veterinarians and welfare organizations can also be improved through the creation of partnerships that benefit all members in their goals of advancing animal welfare. For example, the Nova Scotia SPCA has been developing partnerships with veterinarians to offer accessible spay/neuter opportunities at SPCA branches, resulting in lower administrative burden for veterinarians

since they only deal with one entity, the SPCA. SPCA staff handles service administration and education, including promotion of ongoing veterinary care at private clinics (Williams, 2012; S. Flemming, personal communication, August 14, 2013).

Many veterinarians may view their role in providing low-cost spay/neuter solely as a charitable activity where they contribute services in a separate sphere from their day-to-day practice. However, an Oregon state veterinary practice manager who has many years of experience working with providers of low-cost spays and neuters and running a low-cost program writes in Veterinary Economics magazine, "Our practice is successful, grossing seven figures. Our doctors and staff are paid well above the nationwide average for our positions. It's simply not true that low-cost spay/neuter programs can't be a productive component of both practice success and the fight against pet overpopulation" (Palmer, 2011).

Reducing companion animal overpopulation has important societal benefits, and initiatives that achieve these benefits should be publicly-funded. Municipalities already allocate resources for animal services, including addressing public complaints, impound, sheltering, and euthanasia of cats and dogs. Investment in accessible spay/neuter programs is



more cost-effective and reduces the homeless population, effectively addressing the root of the problem. There may be many approaches the public sector can consider to support veterinarians and shelters directly in their contribution to spay/neuter initiatives, including, but not limited to:

- granting tax benefits to veterinarians on the basis of their provision of accessible spay/neuter services;
- developing appealing public education initiatives;
- providing citizens with incentives and rewards for sterilizing animals;
- engaging with animal welfare agencies and veterinarians to create and expand local accessible spay/neuter services;
- providing ongoing, stable funding for accessible spay/neuter initiatives;
- subsidizing all spay/neuter surgeries, no matter whether they are carried out in a shelter, mobile, or private veterinary clinic;
- establishing direct payment for spay/neuter surgeries across society, similar to direct payment by provincial health insurance plans for essential services.

Identifying the best approaches for any given community will require collaborative discussion between all local stakeholders.

Because companion animal welfare is a community-wide issue, it stands to reason that many successful accessible spay/neuter programs are founded on collaborative partnerships involving local governments, veterinarians, Humane Societies, SPCAs, rescue groups, spay/neuter groups, and TNR Groups making coordinated efforts across the community. For example, the Regina Humane Society directly attributes the success of Regina's spay/neuter program to collaboration between the humane society, veterinarians, the provincial veterinary medical association, the City of Regina, pet retailers, rescue organizations, and targeted communities with the highest incidence of animal welfare issues (CFHS, 2012). Therefore, community engagement and collaborative partnership are key components of the CFHS's recommendations.

Recommendations

FOR ANIMAL WELFARE ORGANIZATIONS

- As historical leaders in addressing issues of companion animal overpopulation, the animal welfare community engage collaboratively with other stakeholders and advocate for accessible spay/neuter programs locally, provincially, and nationally.
- Shelters, SPCAs, humane societies, and rescue organizations incorporate a mandatory spay/neuter program as part of their companion animal adoption procedures.
- Be innovative in creating public outreach activities that engage specific communities and build trust.

FOR THE VETERINARY COMMUNITY

- Schools of veterinary medicine and private practice veterinarians collaborate with the animal welfare community to address this critical animal welfare issue.
- Veterinary medical associations work with community stakeholders to identify elements within their current regulations and policies that limit accessible spay/ neuter and remove these elements without delay.
- The veterinary community support high-quality/high-volume and subsidized spay/ neuter initiatives.

FOR GOVERNMENTS

- Each municipality review the current state of companion animal overpopulation and spay/neuter needs in its jurisdiction and establish positive working relationships with local animal welfare and veterinary stakeholders to devise a well-funded accessible spay/neuter program.
- Municipalities establish and enforce companion animal licensing for both cats and dogs that set significantly higher fees for unsterilized versus sterilized animals.
- Revenue from animal control programs (such as licensing fees) be invested directly in accessible spay/neuter initiatives.
- Municipalities recognize the important, long-term benefits of establishing their own accessible spay/neuter clinics and employ veterinarians on staff that are specialized in high-quality/high-volume spay/neuter surgery.
- Local and provincial governments demonstrate leadership and engage the community (including veterinarians, animal welfare organizations, other charitable organizations, concerned citizens) to develop accessible spay/neuter solutions.
- Public authorities implement consistent, coordinated spay/neuter communication as well as education/outreach programming to promote the importance of companion animal sterilization.



IN GENERAL

- High-quality/high-volume and mobile spay/neuter programs be implemented to target segments of the population that currently have few accessible options.
- Specific spay/neuter initiatives be established to support small rescue organizations and Trap-Neuter-Return initiatives for feral cat colonies.
- All organizations or establishments that offer animals for sale or adoption incorporate mandatory spay/neuter into their procedures.

If all stakeholders acknowledge companion animal overpopulation as a community issue and work compassionately and collaboratively to address it using existing solutions, the tremendous cost and suffering being borne across the country will be alleviated.

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