

CLOSING THE SPAY-NEUTER GAP: EXPLORING OPTIONS FOR VETERINARY ‘FIXES’

BY HANNAH WEITZENFELD, DVM

We are faced with pressing veterinary shortages and their substantial impacts on companion animal welfare.

To venture beyond the surface to examine the issues and innovative solutions, this article reviews the research on the evolving concerns related to lack of spay-neuter access, explores the realm of high-quality, high-volume spay-neuter (HQHVSN) approaches, unpacks the research behind recommendations on spay-neuter ages for cats and dogs, and delves into the transformative spectrum-of-care model, presenting an examination of the challenges that prevail, and how we might approach them to improve outcomes for our communities and the animals in them.

Surgical sterilization via ovariectomy and castration has been the mainstay of fertility control of North American dogs and cats for decades. The impact of the veterinary shortage on the availability of companion animal sterilization and other veterinary services has certainly had an anecdotal impact on shelters across Canada¹ and was also evident in a 2022 study from the University of Tennessee documenting the results of a survey of California animal shelters. The study found that 40 per cent of shelters struggled to consistently offer spay and neuter services, and 78 per cent couldn't support community care initiatives like trap-neuter-return (TNR) programs². The reduced capacity for proactive animal population management leads to significant consequences, such as increased animal overpopulation in communities, increased animal shelter intake and longer stays, and reduction of shelters' and communities' abilities to provide animals with positive outcomes.

Another 2022 study, COVID-19-Associated Reduction of Spay-Neuter Surgeries in Dogs and Cats, suggested that there is a deficit of 2.7 million spay and neuter surgeries in the USA that the veterinary sector and animal welfare organizations have yet to address. The same factors have led to this phenomenon north of the Canada-USA border. Adding to that, “as veterinary care has become more expensive over the past several decades, increasingly more and more pet guardians have difficulty obtaining even routine wellness care, such as vaccinations, parasite control, and spay-neuter surgery³.” With the added context of post-pandemic rise in companion animal populations and the ongoing veterinary shortage, veterinarians, animal welfare organizations, and pet guardians are looking for innovative ways to increase spay and neuter access for shelter and community animals.

Canadian animal shelters are warning of a crisis of overpopulation of companion animals. These increases in animal populations are often linked with the recent reduced availability or accessibility of veterinary care, including sterilization, within communities¹. Historically, acquiring puppies from shelters in British Columbia was challenging, due to low supply and high demand. Now, with the increase in puppies coming into care, shelters across Canada are now seeing puppies experiencing longer stays or even partially growing up in shelters, increasing contagious disease risks and the potential for behavioural challenges. At the BC SPCA, although we are seeing increases in intakes of all animal types in 2023 compared to 2022, the dramatic rise in puppies (77 per cent) and rabbits (109 per cent) across our 34 shelters are especially substantial and significantly eclipse pre-COVID-19 intake numbers. The rise in intakes of these species aligns with those for which guardians encounter the most barriers in accessing sterilization services.

HQHVSN: ADDRESSING SURGICAL STERILIZATION SHORTFALLS

In the USA and some other countries, widespread HQHVSN clinics have made surgical sterilization more accessible through streamlined processes.

The HQHVSN approach utilizes efficient, team-oriented practices and specialized surgical techniques to enable veterinarians to safely sterilize up to 30–50 animals daily. This approach reduces surgical time and incision size, lowering anesthetic risk, reducing complication rates, increasing patient comfort, and reducing costs. “By adopting similar systems and techniques that lower the cost of spay-neuter surgery, practitioners could potentially pass on cost savings to clients^{4,5}.”

Under development since the 1970s, HQHVSN techniques have evolved with veterinary medicine. A study of a single HQHVSN clinic, performing procedures on over 100,000 cats and dogs, showed mortality rates to be one-tenth of those in low-volume private practices⁶. The Association of Shelter Veterinarians (ASV) has issued guidelines to ensure high standards, covering preoperative, anesthetic, surgical, and postoperative care^{7,8}. Addressing financial impacts, a study found that most cats sterilized by low-cost clinics had never visited a veterinarian before⁹.

Canada, as compared to the USA, has the added setback of far fewer HQHVSN clinics and training opportunities. Canada also faces unique challenges, particularly related to smaller human populations, many areas with great need for services being remote and far from urban centers where veterinary clinics and professionals are concentrated, and reduced non-profit funding, says Alex Ellis, DVM, DABVP (Shelter Medicine). Additionally, in some provinces, regulatory restrictions prevent non-profits from providing veterinary care to community animals. As well, in some provinces, restrictive regulation around veterinary anesthetic procedures and a shortage of registered veterinary technologists have hindered veterinarians from practising this proven approach.

Several weeks ago, on a shelter medicine rotation with the BC SPCA, a veterinary student shared that their surgery professors are teaching the class of 2024 to avoid the use of spay hooks in cats, and to “double ligate everything.” Some veterinary schools have adopted certain HQHVSN techniques, applying this approach to adjust their teaching strategies to help students understand how to tie effective knots, how to determine if they've done so, how to use a spay hook safely and effectively, and other high-efficacy techniques. Spay-neuter access may be improved through increasing information and training related to HQHVSN, as well as addressing regulatory hurdles. While formal HQHVSN training is not currently available in Canada, there are some HQHVSN continuing education opportunities available to Canadian veterinarians in the USA and abroad, as well as online learning opportunities and informational resources included with the references for this article.

“TIMELY SPAYING OR NEUTERING AND VACCINATION TAKE CENTRE STAGE...”

SPAY AND NEUTER GUIDANCE FOR COMMUNITY AND SHELTER ANIMALS

At the SPCA, we are once again hearing from potential guardians the old adages of allowing animals to go through a heat cycle prior to spaying. Often, animal care decisions originate from internet research or word of mouth. Veterinarians play a vital role in promoting responsible pet guardianship and preventing overpopulation. As veterinarians, we can help pet guardians wade through the information towards evidence-based decisions that serve the interest and welfare of pets, their guardians, and communities. We sometimes hear rationalizations, such as, “he’ll only be going off leash in the trails nearby” or, for cats, “she was only living with her brother, and they were only six months old.” In cases where spay or neuter is delayed until or beyond puberty, helping pet guardians to understand the risk and providing recommendations to prevent reproduction, even in the absence of warnings or signs of fertility, is an important part of veterinarians’ roles in these situations¹⁰.

With discordant research on the optimal timing for spaying or neutering confounding evidence-based recommendations, veterinary recommendations on when to spay and neuter often vary. In recent years, the recommendations provided by veterinarians on optimal age to spay and neuter have appeared to drift towards later ages, well beyond the ages that animals are able to reproduce. Despite a small number of studies warning of the risks of early-age—or even traditional-age—surgical sterilization in some animals, major veterinary organizations, including the CVMA, continue to take positions in support of early spay and neuter¹¹.

Studies highlighting potential adverse effects of spaying and neutering, particularly those authored by Dr. Benjamin Hart, repeatedly utilize a dataset from a specialty teaching hospital. These studies suggest risks associated with early neutering, primarily related to joint problems and certain types of cancer in medium and large-breed dogs¹²⁻¹⁵. However, it’s vital to recognize the limitations, including small sample sizes for specific breeds, conditions, and sterilization ages, along with biased sample populations restricted to those admitted to a specialty teaching hospital, and retrospective study designs with uncontrolled variables^{16,17}. The aforementioned references^{16,17} by Philip Bushby, DACVS, provide excellent analysis of this data, allowing practitioners to easily identify some of the specific and notable pitfalls of this research.

When it comes to cats and small-breed dogs, evidence clearly indicates that the benefits of early sterilization outweigh the risks. There are few documented conditions with increased risks with early spay and neuter procedures in these types of animals, and these conditions are generally of low incidence and consequence. Accordingly, for cats, the American Association of Feline Practitioners (AAFP) supports the sterilization of cats not intended for breeding by five months of age¹⁰.

Long-term, large-scale studies have linked spaying and neutering of cats and dogs to an extended lifespan^{18,19}. Early spaying or neutering also reduces the risks of more common conditions, such as mammary cancer, pyometra, trauma, fighting, infections, and some other cancers^{15,16,19,20}. It’s also worth noting that spaying and neutering at an older age carries its own set of risks, including larger incisions, increased bleeding, trauma, and pain, due to the degree of development of the structures and blood vessels. Post-pubertal spay in dogs has also been associated with increased post-surgical complications as compared to pre-pubertal procedures²¹. Additionally, post-pubertal procedures can be more costly and/or require more surgical and anesthetic time, reducing access to care.

Similar to the CVMA’s position statement, the 2022 Association of Shelter Veterinarian Guidelines recommends spaying or neutering animals prior to adoption to reduce the risk of unwanted litters prior to surgery, including animals over six weeks of age, and 0.7–1 kg body weight. The BC SPCA is committed to spaying and neutering 100 per cent of cats, dogs, and rabbits prior to completion of the adoption process and appreciate the support of community veterinarians in aiding in the realization of this important and life-saving goal.

SPAY AND NEUTER – A SPECTRUM OF CARE APPROACH

We’ve all witnessed instances of preventable pyometra or vehicular accidents involving intact males pursuing a female in heat that could have been averted through financially accessible spaying and neutering. These scenarios can be emotionally challenging for both pet guardians and the veterinary care team.

With the rising costs of veterinary care in recent decades, an escalating number of pet guardians face challenges in securing routine wellness services, including vaccinations, parasite control, and spay-neuter surgeries. Between 2016 and 2018, more than a quarter (27.9 per cent) of USA households encountered obstacles in accessing veterinary care for their pets, and financial constraints stood out as the predominant reason for these difficulties. In the absence of HQHVSN clinics, how can private practitioners contribute to delivering essential care, including spay-neuter surgery, to the expanding population of pet guardians facing financial constraints?

In embracing a spectrum-of-care model for spay and neuter, the management of cases with limited financial means places a strong emphasis on efficient preventative care strategies. Timely spaying or neutering and vaccination take centre stage, aiming to prevent the adverse and costly consequences associated with the absence of preventative care. This approach may involve thoughtful discussions about the risk and benefit analysis of proceeding with surgery in the absence of certain ideals, such as pre-operative bloodwork or intravenous fluid therapy, especially in young and apparently healthy animals undergoing elective spay-neuter procedures. This approach requires informed consent between the client and veterinarian, prudent patient and procedure selection, and an established policy for managing complications and emergencies that occur during and/or after surgery.

Reduced access to spaying and neutering poses challenges for veterinarians and animal guardians, as well as sheltering organizations. The veterinary shortage, increasing animal populations, and increasing costs call for pro-active solutions to the re-emerging challenge of managing overpopulation, including re-evaluating the cost-benefit analysis of spaying and neutering at different ages, spectrum of care approaches, and HQHVSN techniques. Deployment of these established strategies, as well as ongoing exploration of innovative solutions, is crucial to address increasing pet overpopulation effectively and to improve animal health and welfare for companion animals across BC.

To save space, the references and footnotes for this article are made available on the SBCV website at www.canadianveterinarians.net/sbcv/west-coast-veterinarian-magazine. 