

# MANAGING INCREASING COMPANION ANIMAL OVERPOPULATION USING A ONE-SHOT APPROACH

BY HANNAH WEITZENFELD, DVM



PHOTO SUPPLIED BY HANNAH WEITZENFELD

Dr. Gina Bowen (left) administers medication with assistance from staff.

**S**urgical sterilization via ovariectomy and castration has been the mainstay of fertility control of North American dogs and cats for decades. This modality is effective and permanent, though highly resource-intensive, requiring anesthesia, equipment, a licensed veterinarian with surgical training, along with additional staff and other resources.

An alternative approach gaining attention is non-surgical contraception. The use of these products can be more efficient in terms of veterinarian and staff time, and, in some cases, cost. Non-surgical contraceptives fall into several categories: immunocontraceptives, GnRH agonists and antagonists, sex steroids, gene therapy, and gonad cytotoxic drugs, also known as “chemical castration.” While there have been drugs in each of these categories approved internationally, most have had limitations that have prevented widespread use, including efficacy, cost, duration of action, method of administration, safety, or a combination of these.

# “...NON-SURGICAL STERILIZATION CAN BE A VALUABLE TOOL FOR CONTRACEPTION AND POPULATION CONTROL.”

Earlier this year, a promising study revealed that a viral-vectored gene therapy aimed at stimulating the production of anti-Müllerian hormone (AMH) can achieve enduring sterility in female cats by inhibiting ovulation through a solitary intramuscular injection. Experts suggest this could be an effective tool in feral cat population management. However, this contraceptive injection has yet to be approved or commercially produced.

A noteworthy product now accessible to veterinarians is the Deslorelin-releasing biodegradable implant called Suprelorin. Deslorelin acts as a GnRH antagonist, preventing LH secretion by downregulating GnRH receptors, thereby inhibiting testosterone production. As LH secretion is curtailed, this approach mitigates many risks associated with surgical castration. Suprelorin has been available in various countries, including Australia, the European Union, Mexico, and China, since as early as 2007. In April 2022, Virbac Animal Health received regulatory approval to introduce Suprelorin to the Canadian market, making the 4.7 mg implant available through veterinary distributors in British Columbia.

## REAL WORLD APPLICATION OF NON-SURGICAL STERILIZATION

One veterinarian, Gina Bowen, Director of Veterinary Services for the Winnipeg Humane Society, has extensive experience with Deslorelin. The Winnipeg Humane Society's programs in remote communities provide preventative care services, including non-surgical sterilization, vaccination, and parasite control. Even before Suprelorin's recent commercial availability in Canada, Dr. Bowen had been importing Deslorelin through an Emergency Drug Release (EDR) to sterilize animals in remote Manitoba communities.

“We realized that in remote communities in Manitoba, sterilization implants sometimes make more sense than surgery for dogs. Some reasons for this are weather-related. In winter when you're dealing with a dog population that spends most of their time outside, it's not ideal to be putting them under anesthesia, shaving them and putting them back outside afterwards... It may also be a resource issue—we may not have access to a facility to do surgery in a community. Implants also require fewer staff and much less equipment.”

Although Suprelorin is only labelled for sexually mature male dogs in Canada, it has been shown to be effective in both male and female dogs as well as cats, including prepubertal animals. “We are now accepted within our EDR that we can administer it to male and female dogs that are over four months of age and over ten kilograms”, says Bowen. Due to its significantly longer duration of action (one-to-two years), the program utilizes the larger 9.4 mg size of Suprelorin, which still requires an EDR.

Suprelorin implants have been hugely beneficial as a sterilization option for dogs in remote Manitoba communities, allowing a safe population control option in communities where this would otherwise not have been possible. By using this non-invasive and transparent form of sterilization, this program allows veterinarians to build trust with clients who may have had limited exposure to veterinarians, anesthesia, and surgery in animals. Identification of animals is by collar and rabies tag for WHS implants; microchip identification can also be used.

Deslorelin reduces the size of reproductive structures, reducing risks and time required if subsequent surgery is performed. “We did our first surgery clinic in God's Lake last month. It's a community we have visited three other times and have only offered implants there in the past. We were actually doing surgery on dogs that had been implanted previously. The testicles on adult dogs are the size of cat testicles, and big females have a cat-sized uterus. It's really interesting because the drug is actually being absorbed and doing something reproductively to the animal, the animals are still healthy, and those owners are now repeat customers—we already implanted their dog and now they're bringing them back to have permanent sterilization done,” notes Bowen.

Whether in a non-profit or private practice setting, non-surgical sterilization can be a valuable tool for contraception and population control. It offers advantages for animals with high anesthetic or surgical risk and can be a temporary fertility control option for breeder clients. Dr. Bowen emphasizes that the Winnipeg Humane Society will continue to offer a combination of implants and surgical sterilization, recognizing the importance of both methods in their program.

Faced with the challenge of increasing animal populations and limited resources, innovative approaches like high-quality-high-volume spay-neuter practices and non-surgical contraception can play a vital role in providing accessible veterinary care, managing companion animal populations, and promoting animal welfare.

“We were recently in Poplar River; it's a community we have been to several times. It expands our reach by having the option to offer surgical sterilization or an implant to their dog. We had several people who were just wanting vaccines or not sure if they wanted their dog to have puppies at some point, or just coming to check out what we're doing. The implant is a really great option for pet owners to provide temporary sterilization [WHS product is labelled for one year but may last for two years depending on the type of patient] and open up the conversation about surgery.”

As veterinarians and animal welfare organizations explore these options, we aim to make informed decisions that benefit animals and communities alike. Through awareness and education, these solutions have the potential to alleviate challenges faced by veterinarians, pet owners, and animal shelters across Canada.

To save space, the end notes and references for this article are made available on the Chapter's website at [www.canadianveterinarians.net/sbcv/west-coast-veterinarian-magazine](http://www.canadianveterinarians.net/sbcv/west-coast-veterinarian-magazine). **WCV**