## IMPLICATIONS FOR DIFFERENT STAKEHOLDERS OF DIFFERENT PROFILE PRODUCTS: A VETERINARIAN'S PERSPECTIVE

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Veterinarians provide services for a variety of patients and owners, in a range of environments. Each presents unique needs, opportunities and challenges in identifying and implementing effective approaches to canine and feline sterilization.

In choosing a sterilization method, veterinarians will first consider whether sterilization is being performed to prevent unwanted pregnancies (short-term, long-term, or permanent prevention, and in what population); prevent and/or assist in managing undesirable behavior(s) associated with the actions of reproductive hormones; and/or prevent or treat diseases or conditions affecting the primary reproductive tract or secondary sex organs (in the latter case, sterilization is performed to decrease concentrations of sex hormones that can worsen these conditions). In addition to considering the reason(s) for which sterilization is to be performed, veterinarians will consider the following factors in selecting an approach: expected efficacy (e.g., specificity of approach for need [control of reproduction, disease and/or hormone-associated behaviors], duration of action, reversibility); patient and personnel safety; regulatory approval (non-surgical options); drug, equipment, and trained personnel availability/ease of performance; anticipated client compliance; and cost. The 2013 report from the Alliance for Contraception in Cats and Dogs (ACC&D), Contraception and Fertility Control in Dogs and Cats, provides an excellent summary of which and why certain techniques may be preferred by veterinarians practicing in particular environments.

Currently, most veterinarians work in privately or corporately owned brick-and-mortar clinics serving owned dogs and cats. This environment may demand and support the most flexibility in choosing among sterilization options because the client base may be diverse, and equipment and trained personnel supporting multiple approaches are likely to be readily available. In this environment veterinarians will value and choose sterilization techniques that consistently result in good patient outcomes and promote client satisfaction.

While the occasional client may seek temporary control of reproduction (e.g., breeders, those who show in conformation or performance sports), most pet owners desire to permanently prevent pregnancy and suppress sexual behaviors and, accordingly, surgical sterilization or nonsurgical methods resulting in permanent sterility will be most appropriate and utilized. Permanent solutions will be particularly attractive in situations where owner compliance with return office visits and/or multiple administrations of a therapeutic product are of concern. For animals for which anesthetic or surgical risks are of particular concern, nonsurgical methods that have acceptable therapeutic margins, demonstrated effectiveness, and provide the long-term health benefits traditionally associated with surgical spaying and neutering may be preferred.

Veterinarians whose clients include breeders and owners of show animals will appreciate the flexibility offered by nonsurgical products providing various durations of reliable reproductive control.

Recently, concern has emerged regarding some adverse effects associated with surgical spaying/neutering. While risk for these events is generally low (often < 1%) and multi-factorial and, in most cases, the benefits of surgical spaying/neutering outweigh the risks involved, nonsurgical approaches that allow a customized approach to control of the hormonal cascade may present benefits for dogs and cats believed to be at increased risk.

Veterinarians working in shelters or with community animal control or rescue organizations are likely to seek inexpensive, highly effective, easy to administer, and permanent or long-lasting sterilization solutions. Nonsurgical methods meeting the aforementioned criteria or high-volume, high-quality, surgical spaying and neutering (assuming availability of facilities, equipment and appropriately trained personnel) are possible choices in this situation.

Veterinarians who work in mobile environments, whether serving privately owned, facility owned, community owned, or stray or feral dogs and cats, may find that nonsurgical options present advantages when access to surgical facilities is limited.

Patient, client and practice type will all affect which approach to sterilization veterinarians will find to be most appropriate. Accordingly, having a variety of options from which to choose and the exercise of professional judgment are critical to ensuring good outcomes.