Desexing Clinics for Cats and Dogs, Including Paediatrics

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Terminology

- Desex=sterilize=gonadectomy=neuter=fix
- Male animals-neuter= orchiectomy= castration
- Female animals-spay= ovariohysterectomy (OHE)(removal of ovaries and uterus)
  - Can also be ovariectomy (OE) (removal of ovaries only)
- In the US, most commonly referred to as desexing (spay means “to cut”
Types of desexing clinics

- Many different models of desexing clinics have been created to impact pet homelessness and reduce shelter intake and euthanasia numbers.
- Types of models:
  - MASH style
  - In house shelter clinics
  - Mobile clinics
  - Stationary clinics
High Quality, High Volume Spay Neuter (HQHVSN)

• Defined by Association of Shelter Veterinarians (ASV) ’s Veterinary Task Force to Advance Spay/Neuter in 2008

• High-quality, high-volume spay/neuter programs are efficient surgical initiatives that meet or exceed veterinary medical standards of care in providing accessible, targeted sterilization of large numbers of dogs and cats in order to reduce their overpopulation and subsequent euthanasia.
High quality high volume surgery

- High quality surgery is achieved by implementation of very efficient systems and protocols that maintain such standards.
  - Instead of performing many procedures like most veterinary practices, these clinics focus on performing desexing procedures very well
  - Utilize very efficient systems with protocols to maintain standards
  - Technician’s role is critical to keep animals always moving to the surgeon
Medical Guidelines for Spay/Neuter Programs

JAVMA article

Maintain high standards of patient care regardless of where spay/neuter is performed or which program model is utilized

Special Report

The Association of Shelter Veterinarians veterinary medical care guidelines for spay-neuter programs

Association of Shelter Veterinarians’ Spay-Neuter Task Force
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MASH style desexing clinics

**ADVANTAGES**

- Goes to areas in need
- Large geographic radius
- Lower start-up cost
- Quicker start-up time
- Utilize core of volunteers
- Work with and assist multiple organizations

**CHALLENGES**

- Wear & tear on equipment
- Wear & tear on staff
- Need for multiple volunteers
- Need for home base
- Need to identify locations
Shelter Outreach Services (SOS)

- Provides MASH style desexing program
- Established in June 2003 in rural communities in upstate New York
- Desexes approximately 10,000 cats and dogs per year
- Resulted in more collaboration between various shelters and rescue groups
SOS Transport Vehicle
SOS Program
In-Shelter desexing clinic

**ADVANTAGES**

- Desexes prior to adoption
- Transport not needed for shelter animals
- May be less expensive than other options
- May be able to use facility for desexing of public animals

**CHALLENGES**

- May have limited access for public animals
- Disease control may be an issue
- Need separate housing for animals owned by the public
- Private practitioners may object
Smoky’s Desexing Clinic

• Located within Richmond SPCA in Virginia
• Clinic serves:
  – Shelter animals
  – Public animals
  – Free roaming cats
• Animal control officers distribute educational material in areas targeted for desexing
• Goal is 65 surgeries/day
  – 2 veterinarians
  – Well trained medical staff
Mobile desexing clinic

**ADVANTAGES**

- Travel to populations in need
- Self contained
- Could be multi-use vehicle
- Presence in community

**CHALLENGES**

- Expensive to buy & maintain
- +/- dedicated driver
- Small space to work in
- Need safe place to park
- May need separate recovery area
- Cost of insurance, fuel
- Difficult to manage remotely
ASPCA’s Mobile Desexing Clinics

- 5 mobile desexing clinics that provide free or very low cost desexing in an urban area to:
  - Shelters
  - Rescue groups
  - Feral cat caregivers
  - Animals whose owners are on public assistance
    - Targeted geographic locations that have been identified with high relinquishment
ASPCA’s Mobile Desexing Clinic
APSCA’s Mobile Desexing Clinic
ASPCA’s
Mobile Desexing Clinic
Stationary desexing clinic

**ADVANTAGES**

- Can focus on large number of surgeries
- Self contained
- Can cover large geographic area with transport system
- Visible presence in the community

**CHALLENGES**

- Start-up costs higher
- Start-up time longer
- Comply with building, maintenance and zoning laws
- Access may be harder if transport not provided
Desexing
Targeting & Measuring Impact

• All desexing is important...
  But limited resources
  need to be spent wisely

• Focus desexing on animals
  most ‘at-risk’ to enter shelters
  for reasons of overpopulation

• Provides a means to measure
  impact of spay/neuter
So how do we do that?

• **Consider GIS**
  
  • “A geographic information system (GIS) integrates hardware, software, and data for capturing, managing, analyzing, and displaying all forms of geographically referenced information.

  • GIS allows us to view, understand, question, interpret, and visualize data in many ways that reveal relationships, patterns, and trends in the form of maps, globes, reports, and charts.” (www.gis.com)
GIS and targeted desexing

- GIS has the ability to map a shelter’s intake data so informed decisions can be made about targeting desexing services to have the most impact on reducing shelter intake.
- Requires clean data to determine where the animals are coming from and collaboration between shelters and desexing groups to collect data to measure impact.
- For more information and to follow the progress of GIS programs in several communities, go to ASPCApro.org.
For Example... Cat Intake Map
What about Paediatric Desexing?

• Originated in late 1970s because offspring of adopted animals were returned to the shelter
  – Pre adoption desexing began because of non compliance with adoption agreements to desex animals post adoption
  – But intact puppies and kittens were still being released because of 6 month age limit

• **Paediatric** generally defined as between 6-16 weeks of age (some use a weight limit of 1 kg)
Why Paediatric Desexing

1991 MSPCA Study:

Dr. Mackie’s “Oops” Litters

- Litters are born to at least 20% of pet owning households before those animals are desexed
- Many didn’t realize animals could get pregnant at such a young age
Paediatric neutering

• Endorsed by many organizations-AVMA, AAHA, ASPCA, AHA, HSUS , AAFP, Society for Theriogenology, American College of Theriogenologists , CFA, etc

• Studies at Cornell and Texas A&M established short and long term safety

• Studies that raise questions often cite the need for more research

• Literature reviews by Root Kustritz and Scarlett determine that optimal age for neutering has still not been established

• Procedures have been performed for over 30 years
Advantages of pediatric neutering

• Faster surgery time
  – Less fat
  – Less bleeding
  – More elastic tissues
  – Excellent visualization
  – Less suturing

• Less stressful on patient and surgeon!
  – Most surgeons prefer over traditional and older age
Advantages of pediatric neutering

- Faster recovery from anesthesia
- Faster healing
- Less expensive
  - Fewer drugs
  - Fewer surgery materials
  - Less labor intensive
  - Animals discharged same day
  - Few complications
Reproductive tracts of female puppy and kitten
Puppy Castration
Pre-surgical considerations

• Pediatric patients are predisposed to hypoglycemia
  – Have decreased glycogen stores
  – Can lead to seizures, weakness, prolonged recovery

• Hypoglycemia must be avoided
  – Feed patients small meal 2 hours before surgery
  – Limit pre-operative excitement
  – Apply Karo syrup to gums when recovering
  – Feed patient small amount upon recovery
Pre surgical considerations

• Pediatric patients are predisposed to hypothermia
  – Lower percentage of body fat
  – Decreased ability to shiver
  – Low body weight and high surface area

• Hypothermia must be prevented
  – Keep littermates together
  – Reduce contact with cold surfaces
  – Minimal clipping of hair
Pre surgical considerations

• Prevent hypothermia
  – Use warm surgical scrub (avoid alcohol)
  – Carefully protect contact with heat source
  – Limit body cavity exposure
  – Decrease surgical time
  – Reverse anesthetic agents at end of surgery
Prevent hypothermia
Surgical considerations

- Place a towel or heating pad on surgery table
- Ignore extra abdominal fluid
- Can use scrotal approach on puppies
- Tattoo animals to identify reproductive status
- Absorbable skin sutures preferred
- Use care because some tissues are very fragile and tear easily
Gentle Tissue Handling
Post operative considerations

– Can send home same day as they wake up very quickly
– Continue use of supplemental heat, such as heat lamps
– Feed a small meal soon after anesthetic recovery
– Check temperature and glucose status if recovery is prolonged
Conclusion

• Desexing is an important tool to reduce shelter intake and save animal lives
  – To be effective, the public’s animals must also be desexed
  – Should be accompanied by education on responsible pet ownership
• The optimal age for desexing is the subject of ongoing research
• Private owners should consult with their veterinarians to determine whether and/or when to desex
The benefits of desexing females

• Eliminates female dogs attracting unwanted male dogs resulting in unwanted pregnancies
• Eliminates bloody discharge
• Eliminates sexual frustration and some undesirable behavior associated with mating
• Eliminates ovarian and uterine cancer
• Virtually eliminates pyometras and mammary gland cancer
The benefits of desexing males

- Eliminates strong urine odors in male cats
- Markedly reduces incidence of urine spraying
- Eliminates testicular cancer
- Markedly reduces incidence of prostate problems-hyperplasia and prostatitis
- Reduces hormonally influenced cat-to-cat and dog-to-dog aggression
- Eliminates hormonally influenced desire to roam, mount furniture and family members
Possible detriments to desexing

• Desexed male dogs have increased risk of prostatic neoplasms
• Desexed cats have increased risk of diabetes mellitus
• Desexed dogs may have increased risk of
  - Cardiac and splenic hemangiosarcoma
  - Osteosarcoma
• Some desexed female dogs may become more aggressive
Benefits/Detriments of desexing

• “Determining the optimal age of gonadectomy of dogs and cats” (Margaret Root Kustritz, DVM, PhD, DACT) reviews the veterinary literature for pros and cons of desexing

Note:

• When evaluating studies that compare risks for certain conditions between desexed and intact animals, it is important to look at the incidence of such diseases in each animal population
Determining the risk/benefits

For example:

- In female dogs, the incidence of pyometra is:
  - 15.2% by 4 years of age
  - 23% - 24% by 10 years of age

- Hemangiosarcoma is the most common cardiac tumor in dogs, with reported incidence of 0.2%,
  - Breed predilection exists
  - Spayed females reportedly have 5 times the risk of cardiac hemangiosarcoma compared with the risk for sexually intact females
• 2013 Banfield State of Pet Health report states: “Spaying or neutering provides several advantages that likely contribute to a longer lifespan.”

• 2013 University of Georgia study concluded “sterilization was strongly associated with an increase in lifespan, and while it decreased risk of death from some causes, such as infectious disease, it actually increased risk of death from others, such as cancer.”