

# BEHAVIORAL IMPACT OF PUPPY MILL AND HOARDING ENVIRONMENTS

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Ontario Shelter Medicine Association CE Day  
Nov. 17, 2018

## Outline

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- What is a puppy mill?
- Hoarding?
- Behavior of pets from puppy mills
- Environmental effects on behavioral development
- Management/ Treatment
- Prognosis

## What is a Puppy Mill?

- 3
- What is a puppy mill?
  - Commercial breeding establishment (CBE)
    - Professional breeding kennels, High-volume breeders, Large-scale breeders
    - Puppy mill, Puppy farm
  - Large volume of puppy production for resale
    - Pet stores, internet sales
  - Production process
    - Dogs treated like livestock



## What is a Puppy Mill?

- 4
- Variations between establishments
  - Cleanliness
  - Housing systems
  - Group or singly housed?



## What is a Puppy Mill?

- 5
- Common factors between establishments:
  - Large numbers of dogs
  - High density housing
    - At or near legal minimum space requirements
  - Housing breeding dogs for entire reproductive lives in cages or runs
    - Years
  - No enrichment
    - Rare opportunity to exercise or play outside enclosure
    - Minimal to no positive human interaction
  - Minimal to no health care

## Misguided Love

- 6
- Hoarding
  - Mostly older single women
  - Sometimes > 100 animals
  - ~80% cases, dead or seriously ill animals
  - 700-2000 cases annually in US
  - Psychiatric disease; obsessive-compulsive disorder, attachment disorder?



A.U. Luescher

## Hoarding

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- Cats, dogs or other species in hoarding situations
- Unlikely to find cats from CBEs



## Outline

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- What is a puppy mill?
- Hoarding?
- **Behavior of pets from puppy mills**
  - **What do we see?**
- Environmental effects on behavioral development
- Management/ Treatment
- Prognosis

## Adults/ Breeding Animals

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- Owner completed survey
  - Adult dogs adopted from puppy mill
  - Assume most were former breeding stock
- Extensive, long-lasting psychological scars
- Altered mental functioning
- Possible learning deficits
  - Lower trainability
- Difficulty coping successfully with normal existence

McMillan et al. 2011

## Adults/ Breeding Animals

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- Physical health
  - Significantly higher rates of physical health problems



McMillan et al. 2011

## Adults/ Breeding Animals

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- Mental health
  - Significantly higher rates of extreme & persistent fears/ phobias
    - Unfamiliar people
    - Other dogs
    - Noises and motions
  - House-soiling
  - Compulsive/ abnormal repetitive behaviors
    - Circling and pacing
- Staring blankly into space
  - "dazed," "zoned out," "spaced out"
  - Learned helplessness
- Significantly lower rates of trainability and energy

McMillan et al. 2011

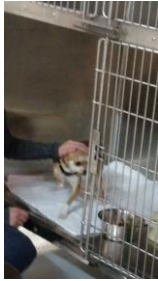
## Adults/ Breeding Animals

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## Adults/ Breeding Animals

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## Adult/ Breeding Animals

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- Mental health (contd.)
  - ~50% lower level of aggression than control pet dogs
    - Unfamiliar people
    - Other dogs
    - Owners
  - Due to overwhelmingly high levels of fear
    - Suppresses normal aggressive behavior
  - Remember this population were only those successfully placed in a home

McMillan et al. 2011

## Puppies

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- Pet store puppies from pet stores compared to breeder obtained
  - Significantly greater aggression
    - Owners
    - Unfamiliar people
    - Other dogs
  - Fear of other dogs and nonsocial stimuli
  - Separation-related problems
  - House-soiling

McMillan et al. 2013

## Learned Helplessness- Puppies too

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## Outline

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- What is a puppy mill?
- Hoarding?
- Behavior of pets from puppy mills
- **Environmental effects on behavioral development**
  - **Why do they behave this way?**
- Management/ Treatment
- Prognosis

## Behavioral Development

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- **Genetics**
- **Ontogeny (development)**
  - Adaptation
  - Learning
- Nature vs. Nurture
  - Nature AND Nurture
  - Epigenetic control of gene expression



## Genetics

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- Gene → Abnormality → Behavior Change
  - Altered neurotransmitter level/ receptors
    - Noise sensitivity in dogs
  - Change in physical structure (phenotype)
    - Blue merle coat pattern and circling
  - Physiologic alteration
    - Neuronal storage disease

## Ontogeny

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- Behavioral Development
  - Interactive process between genetics and environments to create individual's behavioral repertoire
  - Environmental signals turn different genes on or off
    - Epi-genetics
  - Come together to create phenotype and resultant proximate mechanisms for behavior
    - Bird songs

Alcock

## Socialization

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- Socialization Period: 3-12 (4-14) weeks
  - Fear period: 8-10 (12) weeks
    - \*Socialization should continue through adolescence for well adjusted dog
  - **Expose** to various things will encounter during life, paired with **positive** experience
  - Species exposed to at this time
    - Viewed as social partner
  - Lack of exposure during this time
    - Fear
      - Fight or Flight
    - Predatory behavior



## Abnormal Behavioral Development

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- Genetics
- Ontogeny
  - Inadequate socialization
  - **Severe and/or chronic stress**
    - Restrictive confinement
    - Under- or overstimulation
    - Social conflict or deprivation
    - Physical factors
  - Maternal adversity/ stress

McMillan et al. 2011

## Abnormal Behavioral Development

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- **Maternal stress/ Prenatal stress**
  - Alterations to fetal hypothalamic-pituitary-adrenal
- See effect in puppy/ adult
  - Impaired ability to cope with stress
  - Abnormal social behavior
  - Increased emotionality
  - Increased fear



McMillan et al. 2013

## Abnormal Behavioral Development

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- Puppies
- Transport stress during fear period
  - Most puppies shipped ~ 8 weeks of age
- Inadequate positive exposure during socialization period
  - To people, environments, objects, other animals
    - Not occurring at breeding facility
    - Not occurring appropriately at pet store

McMillan et al. 2013

## Outline

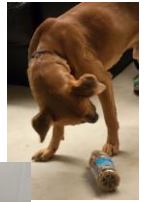
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- What is a puppy mill?
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- **Management/ Treatment**
  - **What can we do?**
- Prognosis

## Treatment Plan

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- Five Steps to Any Treatment Plan
  - Avoidance
  - Relationship building
  - Behavior Modification
  - Tools
  - Pharmaceuticals/ Adjunctive treatments
- The Three Ms
  - Management
  - Motivation
  - Modification



## In the Shelter

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- No punishment or aversive tools
- Martingale collars
- Humane well fitted harness
- Double leash to prevent escapes
- High priority for foster home
- Quiet low traffic housing area



## In the Shelter

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- **House with other dogs**
  - Observational learning
  - Most are social to other dogs
- **Neutral interactions**
  - Minimal interactions
  - Occur on dog's terms as comfortable enough to approach
- **Counter conditioning**
  - Pairing events and interactions with treats
  - Every interaction

## Counter Conditioning

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## In Foster

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- High priority for foster
  - Preferably with another dog
- Secure fenced-in yard
  - Control environmental exposure
- Walk though doorways on leash
  - In and out of house to yard
    - Thresholds are frightening
  - Drag long light leash in yard
    - Facilitate bringing inside without grabbing collar or cornering

## In Foster

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- **Daily routine**
  - Consistent and predictable daily routine
  - Know what to expect during the day decreases anxiety
    - Level of control over environment
- **Safe Spots**
  - Start small
  - Several through home
  - Pet can retreat but still feel safe as ventures out
    - Out of high traffic areas
  - Don't approach when in safe spot



## In Foster

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- **Neutral interactions**
  - Previous interactions with people approaching perceived as not safe
    - Learned helplessness
  - Initially avoid approaching when retreated or hiding
    - Unless need to eliminate or is meal time
  - Do not pet, hug, kiss, carry or otherwise force interactions
  - Advocate for pet
    - Do not allow guests, friends, or passersby on walks to do this either

## In Foster

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- **Counter conditioning**
  - If ventures out, drop a treat on ground nearby
    - Might need to walk out of room initially for pet to feel safe enough to take it
    - Do not look at, talk, to or approach pet



## In Foster or Shelter

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- **1 Second 1 Hand Rule for Interactions**
  - Once pet begins to approach to solicit interaction
  - If showing relaxed social body language
    - Pet under chest (dog) around head/ chin/ ears (cat)
    - 1 second using 1 hand
  - Pause and wait to see what pet does next
    - If shows that wants to continue interaction, can do so for another 1 second with 1 hand
    - If does not solicit more attention or walks, moves, or looks away, then end interaction
  - Example
    - <http://www.youtube.com/watch?v=-cGDYI-s-cQ>
    - Dog body language- say yes or no to petting

## In Foster or Shelter

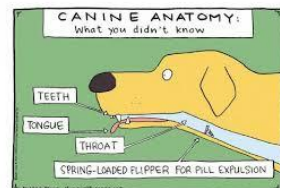
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- **Positive reinforcement training**
  - Capturing method least frightening
  - Target training
  - Often called "touch" where pet touches hand (or target stick) with nose
- **Additional resources:**
  - Fearful Dog website by Debbie Jacobs
  - <http://fearfuldogs.com/>

## Medication

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- Often needed
  - Cannot manage and avoid all triggers for fear
  - Must address immediate welfare emergency and quality of life concerns
  - Often permanent neurochemical imbalance present from abnormal development secondary to barren environments
- Consider
  - Cost
  - Frequency of dosing
  - Time to effect
  - Side effects/ monitoring needs



## Medication

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Fast acting anxiolytic used immediately to try to reduce current anxiety and stress

- Trazodone
  - Inexpensive
  - Twice daily dosing
- Benzodiazepines
  - Inexpensive
  - Dose 3-4 times daily
  - Controlled drug/ Risk for diversion
- Gabapentin
  - Relatively inexpensive
  - Dose 2-3 times daily
  - Controlled in some states
- Clonidine
  - Inexpensive
  - Dose q 6-8 hrs or PRN

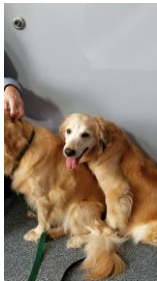
## Medication

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- Chronic baseline anxiety control often needed to manage long lasting psychological damage
- SSRIs
  - Fluoxetine (Reconcile, Prozac)
- TCAs
  - Clomipramine (Clomicalm, Anafranil)
- Azapirone
  - Buspirone (Buspar)

## Puppy Mill Follow Up Visit

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## Outline

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- What is a puppy mill?
- Hoarding?
- Behavior of pets from puppy mills
- Environmental effects on behavioral development
- Management/ Treatment
- **Prognosis**
  - **A realistic expectation**

## Prognosis

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- **Poor to Guarded**
- Level of fear and avoidance are profound
  - Significant concern for quality of life
    - Poor emotional wellbeing
  - Likely always be very fearful
    - Careful lifelong management required
      - To remain safe
      - To have reasonable quality of life

## Prognosis

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- **Poor to Guarded**
  - Improvement in fear will likely be a very slow process
    - Expect 1-2 years before any appreciable improvement
- Any interested adopters must be made aware of commitment to patience and management required

## What Lies Ahead...

- By the time the puppies and dogs get to the shelter/ rescue, much of the damage is already done
  - Shutting down puppy mills and hoarding is not enough
- If make commitment to take in puppies in shelter setting, must be prepared to offer what they need to develop normally
  - Behavior pathology can occur secondary to sheltered setting too

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## Thank You for Your Time!

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