THE 4 S'S OF SHELTER MEDICINE

Students, Shelters, Suburban and Sonic
A community based learning opportunity

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Training Veterinary Students in Shelter Medicine: A Service-Learning Community-Classroom Technique

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Shelter Medicine

• Emerging Field
• Diplomate status pending (ABVP)
• Residencies
• Wide discipline to cover
  ➢ Infectious Disease
  ➢ Behavior
  ➢ Facility Design
  ➢ Population and Individual Medicine
  ➢ The list continues…..
Shelter Medicine Teaching Models

- Veterinary facility in a shelter
- Mobile Surgical Units
- Externships
Shelter Medicine:  Field Service Model

GOALS

• Teach shelter medicine in a variety of settings
• Hone primary care skills
• Engage students with their community

# 1 Students
Shelter Medicine: Field Service Model
Expectations for Students

• Attendance and participation
• Fully engaged during rounds
• Shelter assessments (facility, infectious disease protocols, individual animal care, behavioral management)
• Preventative health measurements
• Courteous and knowledgeable on shelter workers concerns and needs
• Group or individual shelter based project
#2 Shelters

- Variety of shelters
  - Government
  - Humane organization
  - Private
  - Limited/Open Admission

- Support shelters (sustainable and realistic)
- Expose students to community needs
Shelter Medicine: Field Service Model
Program Design

- 2 week rotation (M-F)
- 4th year rotation (elective)
- Offered 4 times per academic year
- Travel under 1.5 hours
Shelter Medicine: Field Service Model
Logistics
Shelter Medicine: Field Service Model
Program Design

## Shelters

<table>
<thead>
<tr>
<th>Type of facility</th>
<th>Annual budget</th>
<th>Annual intake</th>
<th># euthanized</th>
<th>Cost/animal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td>2.3 million</td>
<td>12,500</td>
<td>8,500</td>
<td>187</td>
</tr>
<tr>
<td></td>
<td>835,000</td>
<td>6,000</td>
<td>4,000</td>
<td>129</td>
</tr>
<tr>
<td></td>
<td>386,000</td>
<td>3400</td>
<td>2300</td>
<td>106</td>
</tr>
<tr>
<td></td>
<td>295,000</td>
<td>2800</td>
<td>2200</td>
<td>99</td>
</tr>
<tr>
<td></td>
<td>456,000</td>
<td>6400</td>
<td>4700</td>
<td>69</td>
</tr>
<tr>
<td></td>
<td>1.6 million</td>
<td>15500</td>
<td>7700</td>
<td>103</td>
</tr>
<tr>
<td>Private</td>
<td>895,000</td>
<td>400</td>
<td>1</td>
<td>*</td>
</tr>
</tbody>
</table>

- 7 Government (county) shelters
- 2 Humane organization shelters
- 2 Private Shelters
- 1 Rescue Organization with onsite facilities
Shelter Medicine: Field Service Model

# 3 Suburban

- 6 students (+/- 1 animal) comfortably
- Supplies
- Rounds on the road
Shelter Medicine: Field Service Model

Logistics

Rotation specifics

• 12 rotations over 4 year period
• Year 1,4: 1 faculty member
• Year 2,3: 2 faculty members (split rotation)
• Initial budget: $5,100.00
• Subsequent budgets: $2,100.00
### Shelter Medicine: Field Service Model

#### Logistics

#### Sample schedule

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
</table>
|        | • Orientation  
   • Shelter 1 visit  
   • Tour  
   • HOLD | • Shelter 2 visit  
   • Tour  
   • HOLD | • Shelter 3 visit  
   • Tour and discussion  
   • Shelter 4 visit  
   • Tour and discussion | • Shelter 5 visit  
   • Behavioral evaluations (1/2 day)  
   • Ride with ACO (1/2 day) | • Shelter 6 visit  
   • Tour  
   • HOLD |

<table>
<thead>
<tr>
<th>Week 2</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
</table>
|        | • Shelter 7 visit  
   • Tour and discussion  
   • Early day to allow for project development | • Return to Shelter 2  
   • Follow-up discussion  
   • HOLD | • Shelter 8 visit  
   • Tour and discussion  
   • Shelter 9 visit  
   • Tour and discussion | • Shelter 10 visit  
   • Behavioral evaluations (1/2 day)  
   • Ride with ACO (1/2 day) | • Rotation wrap-up  
   • Student presentations  
   • Opportunity for feedback |

Shelter: may refer to a physical shelter or rescue group facility  
HOLD: Hands on Learning Day
Shelter Medicine: Field Service Model
Results

Averages per rotation

- 118 Physical examinations
  - 60% canine/40% feline
  - Other animals: pigs, goats, ferrets, snakes
- 78 Canine vaccinations administered
- 29 Feline vaccinations administered
- 60 Heartworm (snap) tests administered
- 15 FeLV/FIV tests administered
- 70 Fecal analyses
- Miscellaneous testing included: cytology, skin scrapes, Schirmer tear test, fluorescein testing, parvovirus testing, giardia testing, woods lamp examination
# Shelter Medicine: Field Service Model

## Results

<table>
<thead>
<tr>
<th>Diagnoses made</th>
<th>Cats</th>
<th>Dogs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viral and infectious</td>
<td>Panleukopenia</td>
<td>Parvovirus</td>
</tr>
<tr>
<td>diseases</td>
<td>URI complex</td>
<td>Heartworm infection</td>
</tr>
<tr>
<td></td>
<td>FIV/FeLV</td>
<td>URI complex</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Erlichia</td>
</tr>
<tr>
<td>Dermatologic conditions</td>
<td>Dermatophytosis</td>
<td>Dermatophytosis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Demodectic and sarcoptic mange</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pyoderma</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Otitis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fleas and flea allergy dermatitis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wounds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Embedded collar</td>
</tr>
<tr>
<td>Orthopedic diseases</td>
<td></td>
<td>Fractures (new and old)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dislocated coxofemoral joints</td>
</tr>
<tr>
<td>Oral cavity disorders</td>
<td>Dental disease</td>
<td>Dental disease and grading</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oral foreign body</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pulpal hemorrhage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dislocated mandible</td>
</tr>
<tr>
<td>Gastrointestinal disease</td>
<td>Intestinal parasitism</td>
<td>Intestinal parasitism</td>
</tr>
<tr>
<td>Reproductive system</td>
<td>Pregnancy</td>
<td>Cryptorchidism</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pregnancy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Open pyometra</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mastitis</td>
</tr>
<tr>
<td>Ocular disease</td>
<td>Corneal ulceration</td>
<td>Corneal ulceration</td>
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<tr>
<td></td>
<td>Eyelid agenesis</td>
<td>Entropion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cherry eye</td>
</tr>
<tr>
<td></td>
<td></td>
<td>KCS</td>
</tr>
<tr>
<td>Behavioral concerns</td>
<td>Aggression</td>
<td>Aggression</td>
</tr>
<tr>
<td></td>
<td>Anxiety</td>
<td>Stereotypic and self-mutilatory behavior</td>
</tr>
<tr>
<td></td>
<td>Barbering/psychogenic alopecia</td>
<td>Anxiety</td>
</tr>
</tbody>
</table>
Shelter Medicine: Field Service Model
Projects

• Whelping box design
• Marketing plan
• Fee increase justification for kennel hire
• Vaccination protocol for a canine distemper outbreak
• Cost analysis for fecal examination vs routine deworming
• Computer algorithm to treat URI in cats
• Behavioral enrichment techniques
• Disinfection protocols
• Grant proposal for portable air conditioning units
• Signage
• Feral cat box recommendation
• Outdoor run recommendation
Project Results
Shelter Medicine: Field Service Model

Outcomes

- Students honed primary care skills
- Exposure to large variety of shelters
  - Unique needs of each shelter
  - No cookie cutter answer to problems/issues
- 1:3-1:6 Faculty to student ratio
- Positive student feedback
  - >95% A +B’s for overall rotation
- Positive shelter feedback
- Challenges
  - Travel time
  - Set up for examinations
Shelter Medicine: Field Service Model

The Last = Sonic